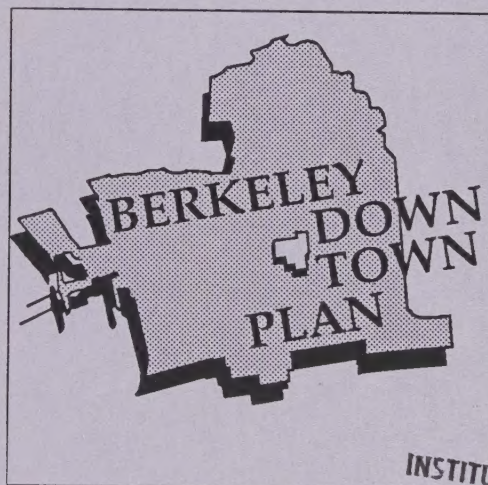


DRAFT  
ENVIRONMENTAL IMPACT REPORT  
for the  
**BERKELEY DOWNTOWN PLAN**



INSTITUTE OF GOVERNMENTAL  
STUDIES LIBRARY

APR 12 1989

UNIVERSITY OF CALIFORNIA

Prepared by:  
**MUNDIE & ASSOCIATES**  
Consultants in Land Use and Economics

In Association with:  
**Engineering-Science, Inc.**  
**Barton-Aschman Associates, Inc.**

March 1989





**DRAFT**  
**ENVIRONMENTAL IMPACT REPORT**  
**for the**  
**BERKELEY DOWNTOWN PLAN**

Prepared by:

Mundie & Associates  
Consultants in Land Use and Economics  
4902 California Street  
San Francisco, CA 94118  
(415) 221-4902

In Association with:

Engineering-Science, Inc.  
Barton-Aschman Associates, Inc.

March 1989

(State Clearinghouse #88062115)





## TABLE OF CONTENTS

	Page <u>Number</u>
I. INTRODUCTION	1
II. SUMMARY	7
III. PROJECT DESCRIPTION	21
Location of the Project	21
Recent History and Characteristics of	
Downtown Berkeley: Impetus for the Plan	21
Project Characteristics	27
How to Cross-Reference the Downtown Plan and this EIR	40
IV. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES	43
Land Use and Planning	43
Socioeconomics	63
Urban Design and Visual Quality	79
Transportation: Traffic, Parking, Transit and Pedestrians	127
Air Quality	165
Noise	171
Hazardous Waste/Toxic Materials	179
Geology, Soils and Seismicity	189
Hydrology and Water Quality	198
Public Facilities and Services	204
Fiscal	213
V. CUMULATIVE AND GROWTH INDUCING IMPACTS OF THE PROJECT	227
VI. SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED	237
VII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	239
VIII. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS OF THE PROJECT	240
IX. SOURCES	241
EIR Contributors	241
Persons and Organizations Contacted	242
Selective Bibliography	243
X. INDEX	247
XI. APPENDICES	255
A. Notice of Preparation (NOP), Initial Study and List of NOP Recipients	
B. Downtown Plan Committee Membership List	
C. Salt Lake City Ordinance Addressing Newsracks	
D. Typical Sound Levels from Indoor and Outdoor Noise Sources	

## LIST OF TABLES

	<u>Page Number</u>
1. Development Standards and Assumptions: EIR Alternatives	29
2. Existing Conditions on Underutilized Parcels in the Downtown Berkeley Study Area	33
3. Detailed Description of No Action Alternative	34
4. Detailed Description of Downtown Plan - Base Alternative	35
5. Detailed Description of Downtown Plan - Maximum Bonus Alternative	36
6. Detailed Description of Low Intensity Development Alternative	37
7. Locations of Corresponding Information in the Berkeley Downtown Plan and Environmental Impact Report	41
8. Downtown Space Use by Land Use Category 1984 Downtown Land Use Survey	45
9. Projection of Downtown Employment Occupation by Industry: No Action Alternative	73
10. Projection of Downtown Employment Occupation by Industry: Downtown Plan - Base Alternative	74
11. Projection of Downtown Employment Occupation by Industry: Downtown Plan - Maximum Alternative	75
12. Projection of Downtown Employment Occupation by Industry: Low Intensity Alternative	76
13. Overview of Net Socioeconomic Impacts	77
14. Downtown Berkeley Landmark Buildings	81
15. Relationship of Alternatives to Policies Related to Historic Preservation and Urban Design	105
16. Matrix of Visual Sensitivity	109
17. Signalized Intersection Level of Service Definitions	130
18. Existing PM Peak Hour Levels of Service	131
19. AC Transit Weekday Load Factors	137
20. BART Weekday Load Factors	138
21. Comparison Among Objectives, Policies and Programs	143



## LIST OF TABLES (Continued)

	<u>Page Number</u>
22. Trip Generation Rates	147
23. Net Increase in Trip Generation	148
24. Cumulative Intersection Level of Service Summary	150
25. Summary of Corridor Impacts	152
26. Downtown Employee PM Peak Hour Transit Trips	153
27. Projected AC Transit Peak Hour Load Factors	154
28. Projected BART Load Factors	154
29. Future Parking Demands, Supplies and Deficiencies	156
30. Impacts on Mode Split Associated with the TSM Program	157
31. Maximum Ambient Air Quality Levels Measured at Oakland and Richmond	166
32. Maximum Background CO Concentrations	167
33. Maximum CO Concentrations of Alternatives	169
34. Vehicular Traffic Emissions	169
35. Noise Measurements	174
36. City of Berkeley Noise Standards	175
37. List of Parcels on Which Hazardous Materials Were Used	181
38. Current Contamination Sites	185
39. Seismicity of Active and Potentiall Active Faults Most Likely To Affect the Berkeley Downtown Area	192
40. Projected Water and Sewage Generation	208
41. Projected Solid Waste Generation	212
42. Allocation of Existing Property Tax Revenue	216
43. Allocation of Projected Property Tax Revenue by Alternative	224
44. Comparison of Annual Fiscal Impacts of Four Development Alternatives	225
45. Cumulative Development List	228

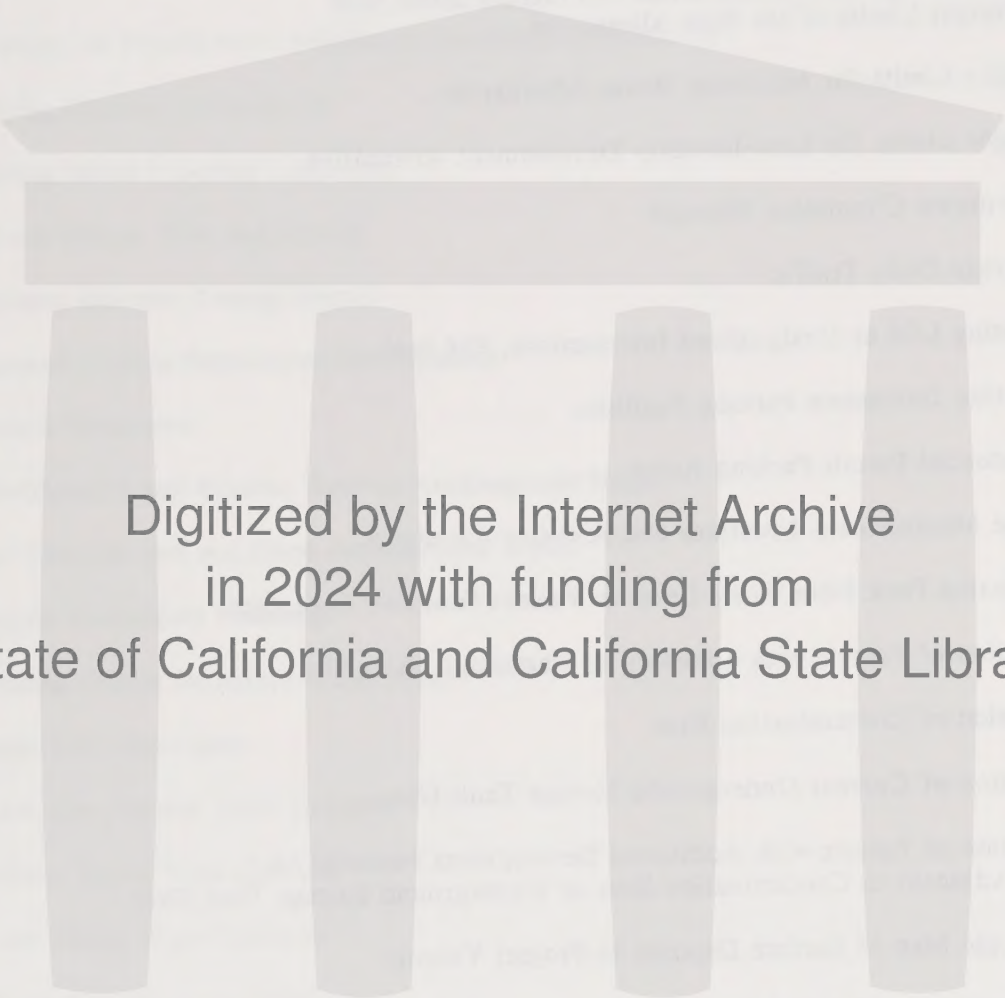
## LIST OF FIGURES

	<u>Page Number</u>
1. Project Location	22
2. Berkeley Downtown Plan Study Area	23
3. Subareas	24
4. Locations of Parcels with Additional Development Potential	30
5. Existing Downtown Land Use	46
6. Existing Street Frontage Land Use	47
7. Current Master Plan and Zoning	48
8. Proposed Historic Zoning District	52
9. Proposed Zoning Regulations for Subareas	56
10. Historic Structures	80
11. Neo-Classical and Mission Revival Architectural Styles	82
12. Neo-Classical and Art Deco Architectural Styles	83
13. Modern Downtown Buildings	85
14. Building Height Inventory (June 1988)	86
15. Major View Corridors	87
16. University Avenue View Corridor	89
17. Addison Street View Corridor	90
18. Center Street View Corridor	91
19. Allston Way View Corridor	93
20. Shattuck Avenue View Corridor	95
21. Oxford Street View Corridor	96
22. External Views of Downtown Berkeley	97
23. View of Downtown Berkeley from U.C. Campus	99
24. Downtown Landscaped and Pedestrian Areas	100
25. Outdoor Sitting Area and Newsracks	101
26. Height Limits for No Action Alternative	111



## LIST OF FIGURES (continued)

	<u>Page Number</u>
27. Photomontage of Fulton Street and Addison Corridors with Height Limits of the No Action Alternative	112
28. Height Limits for Base Alternative	114
29. Photomontage of Addison Street and Oxford Street with Height Limits of the Base Alternative	116
30. Height Limits for Maximum Bonus Alternative	118
31. Height Limits for Low-Intensity Development Alternative	120
32. Downtown Circulation Network	128
33. Average Daily Traffic	129
34. Existing LOS at Unsignalized Intersections, PM Peak	133
35. Existing Downtown Parking Facilities	134
36. Residential Permit Parking Areas	136
37. Noise Measurement Locations and Sensitive Receptors	172
38. Estimated Peak Hour Noise Level at Various Sensitive Receptors	177
39. Location of Parcels with a History of Hazardous Waste Use	180
40. Location of Contamination Sites	184
41. Location of Current Underground Storage Tank Users	186
42. Location of Parcels with Additional Development Potential on or Adjacent to Contamination Sites or Underground Storage Tank Sites	187
43. Geologic Map of Surface Deposits in Project Vicinity	190
44. Regional Map of Active Faults and Earthquake Epicenters	191
45. Maximum Ground Shaking Intensity from Regional Active Faults	193
46. Liquefaction Susceptibility	195
47. Location of Strawberry Creek Features	200
48. Sanitary Sewer Lines	210



Digitized by the Internet Archive  
in 2024 with funding from  
State of California and California State Library

<https://archive.org/details/C124896343>



# CHAPTER I

## INTRODUCTION

### BACKGROUND

#### Purpose of This Report

This environmental impact report analyzes the potential environmental effects that would result from implementation of the proposed *Berkeley Downtown Plan*. The proposed plan is composed of a summary, seven topical elements, an implementation section and an appendix containing background information. The seven elements include:

- *Historic Preservation and Urban Design*
- *Social/Cultural*
- *Environmental Quality, Open Space and Recreation*
- *Economic*
- *Circulation and Transportation*
- *University of California*
- *Land Use*

Each of these seven elements contains four subsections including: 1) a strategic statement; 2) a summary of existing conditions, trends and key issues within the topic; 3) objectives and policies; and 4) programs aimed at operationalizing the objectives and policies. The implementation section further compiles the recommended programs, ordinances and zoning changes in terms of responsibility, source of funding and estimated costs where calculated.

This EIR is a Program EIR. As provided by CEQA, the EIR is an informational document intended for review by members of the public and by concerned public agencies. It is organized and formatted consistent with CEQA Guidelines (§ 15168).

#### Need for an Environmental Impact Report

The California Environmental Quality Act (CEQA) requires that any government project that might have a significant impact on the environment be subjected to full environmental review. The adoption of a Downtown Plan (either as a Specific Plan or as an Area Plan implemented through a series of city ordinance revisions) is defined as such a project under the law.

Determination of whether the project might have a significant impact on the environment is made after publication of a "Notice of Preparation of a Draft Environmental Impact Report" (NOP), which contains a checklist that identifies the types of impacts that may result from the project. The NOP for the *Berkeley Downtown Plan* was published on 17 June 1988 and mailed to 25 public agencies and organizations considered likely to be interested in the impacts of the Plan. In addition, the State Clearinghouse sent copies of the NOP to four additional state and regional agencies beyond those included in the City's list. The cover letter that accompanied the NOP required that comments on the document be received not later than 30 days after receipt of the notice.

The NOP and the distribution list for the NOP are included in this EIR as Appendix A. Copies of responses to the NOP are on file with the Planning and Community Development Department.

### Scope of the Environmental Impact Report

Level of Detail. The *Plan* provides a framework for future decisions and actions that affect the conservation and development of Downtown Berkeley. It is, for the most part, a policy document rather than a direct proposal for a specific action. The implementation section notes that some of its programs can be initiated immediately while others would require ten years or more. As such, it does not specify the full set of actions that would be carried out within the framework it establishes. Therefore, the *Plan* need not be evaluated at the same level of detail as would a specific action.

But attention to the comparison of alternative policy choices needs to be more extensive than under a project-specific report. This EIR examines four different alternatives at an equivalent level of detail. In this way, the analysis focuses on distinguishing the effects of one alternative from another, rather than on the kind of detailed analysis of a preferred alternative conventionally seen in project EIRs.

The State's CEQA guidelines indicate that the degree of specificity in an EIR should correspond to the level of specificity of the underlying activity. An EIR on a planning document should focus on the secondary effects that can be expected to follow from the adoption of the *Plan*, but need not be as detailed as an EIR on the specific development projects that it might permit. All future proposed development projects will be subject to review under CEQA, but to the extent possible, subsequent CEQA documents will be able to use background data and impact forecasts provided in this report as a starting point for their own more specific analysis.

One last point in regard to the level of specificity relates to impact estimates that are quantified: unrounded point estimates are provided in most topical areas though their use is not meant to imply exactitude. When encountering an unrounded point estimate (e.g. new retail jobs projected to occur under a specified alternative), the reader should think of the estimate as being the midpoint of a reasonably narrow range of possible outcomes, rather than unique single point.

Evaluation of the *Plan* at Buildout. As a study that examines policy outcomes and hypothetical levels of future development, the EIR measures impacts as of the buildout year of the *Plan* (i.e., when its environmental effects are fully realized). The buildout year has not been specified, though the City of Berkeley has included some programs and improvements which are expected to take at least ten years to accomplish. Should the market for office, retail and residential space change the rate of absorption for new or renovated downtown space, the planning horizon envisioned for the *Plan* could contract or expand.

Focus on Selected Identified Issues. The CEQA Guidelines permit the preparation of an EIR that focuses on the impacts identified as of potential significance or concern in the NOP. This EIR focuses on the areas of concern identified in the NOP, in comments on the NOP and in comments made at the public scoping session held on 11 July 1988.

Technical subconsultants (listed in Chapter IX) have undertaken analyses of potential impacts in the areas of transportation, urban design, air quality, noise, hazardous waste, hydrology, soils and seismic safety.



Incorporation of Mitigation Measures Into the Project. The CEQA Guidelines recognize the interactive nature of the planning process and the fact that some measures intended to mitigate the impacts of the proposed project may be incorporated in the project proposal. In other words, a project sponsor - in this case, the City of Berkeley - may recognize that the original proposal would have unacceptable adverse impacts on the community and modify that proposal to reduce, or mitigate, those impacts. Thus, the project as presented would already be mitigated to some degree. The Guidelines, as amended, provide that "the discussion of mitigation measures shall distinguish between the measures that are proposed by project proponents to be included in the project, and other measures which are not included, but could be reasonably expected to reduce adverse impacts." Both types of mitigation measures - those included in the project, generally in the form of proposed programs, and those not included - are identified in this EIR.

Reference to Supporting Documents. The State CEQA Guidelines permit the EIR to refer to other documents that contain information directly relevant to the proposed project as an alternative to recounting the information from those documents in the environmental analysis. Because this EIR on the *Downtown Plan* relies on the information presented both in the Plan and in the background reports prepared by staff and consultants under contract to the City during the planning process, this EIR incorporates the following documents by reference:

1. *Downtown Plan: Phase 1 Report*, June 1988
2. *Downtown Plan: Phase 2 Report - A Framework for the Berkeley Downtown Plan*, September 1988
3. *Downtown Plan: Phase 3 Report, Working Document*, September 1987
4. *Analysis of Downtown Berkeley Office, Retail and Housing Market*, August 1985
5. *Berkeley Downtown Transportation Study*, Cambridge Systematics, Inc.: 1) *Conditions Assessment and Strategies*, August 1986; 2) *Assessment of Land Use Scenarios and Transportation Strategies*, April 1987; 3) *Transportation Program and Implementation Plan*, April 1987
6. *Downtown Plan Working Document - Economic Information*, September 1987
7. *Working Paper Number 1: City of Berkeley Downtown Business Locational Factors Survey Report*, November 1987
8. *Downtown Berkeley Land Use Survey*, February 1985

Each of these publications is fully referenced in the bibliography provided in Chapter IX.

## GUIDE TO THIS ENVIRONMENTAL IMPACT REPORT

### Organization of the Report

Chapter II of this report summarizes the *Plan*, the significant adverse impacts which could result and the measures recommended in this EIR to mitigate those impacts to acceptable levels. Cumulative and growth-inducing impacts of this project are also summarized.

Chapter III describes the *Downtown Plan* and the planning process that was pursued to bring the Plan to its current status. It also identifies the technical reports that provide much of the background information for the *Plan* and for this EIR. Included is a matrix that allows cross-referencing of the elements presented in the *Plan* with the topics analyzed in the EIR.

Chapter IV describes the environmental setting of the downtown area and (where relevant) adjacent neighborhoods, and evaluates the environmental impacts of the *Plan*. Policies and programs included in the *Plan* which would serve to mitigate potential adverse environmental effects are described. Additional mitigation measures recommended by the EIR consultants are also set forth where appropriate. Mitigation measures include those which relate to policy impacts of the *Plan* as well as those which could develop out of specific projects allowable under the new *Plan*.

Readers will note that in Chapter IV a total of four alternatives are examined side by side with those impacts common to all grouped together. Impacts specific to a particular alternative are distinguished from the rest.

The cumulative and growth-inducing impacts of the *Plan* are described in Chapter V of the EIR. Unavoidable adverse impacts are presented in Chapter VI. Chapters VII and VIII conclude the impact analysis by considering the balancing of long term productivity with short term uses of the environment and by describing any irreversible adverse impacts.

The background documents referenced in this EIR as well as the persons contacted and contributing to this report are listed in Chapter IX. Chapter X provides an index of key words and phrases found in the report. Chapter XI is an appendix containing materials that are referenced throughout the report.

#### References Within the EIR and to Technical Background Reports

Throughout this EIR, the *Berkeley Downtown Plan* is referred to by either its full name or simply as the *Plan*. References to topical areas of analysis with Chapter IV of this EIR generally use the term "*section*" and are also italicized (e.g., *Land Use and Planning section*). Within topical sections, "subsections" are also occasionally mentioned (e.g., *Setting subsection*).

### COMPLIANCE WITH CEQA REQUIREMENTS REGARDING DISTRIBUTION, NOTIFICATION AND PUBLIC COMMENT

#### Incorporation of Responses to the NOP

Several of the agencies that received the NOP responded by letter (copies are available at the Berkeley Planning and Community Development Department) indicating issues and concerns they recommended be addressed in the EIR. The concerns and comments conveyed in those letters are discussed in and incorporated into this document.

#### Publication of a Notice of Completion

The Notice of Completion of this EIR has been published and filed with the State Clearinghouse in the State Resources Agency, as required by Section 15085 of the State CEQA Guidelines.



### Distribution of the Draft Environmental Impact Report

As set forth in the CEQA Guidelines, the Draft EIR was distributed to concerned public agencies and to individuals potentially interested in the Downtown Plan. The distribution list includes all agencies that received the Notice of Preparation of the Draft EIR. The distribution list is included in the document as Appendix A.

### Public Hearings and Other Opportunities for Public Comment on the Draft Environmental Impact Report

The State CEQA Guidelines further require that the lead agency (City of Berkeley) provide the public with an opportunity to comment on the DEIR. Written comments on the DEIR are being accepted by the city for a period of not less than 45 days following publication of the document. Public hearings on the DEIR will be held by the Planning Commission and by the City Council.





## CHAPTER II

### SUMMARY

This chapter summarizes the environmental impact report, beginning with a brief overview of the project description (Chapter III), but focusing primarily on the topic by topic impact analysis (Chapter IV). Each environmental topic summarized below includes a cross reference to the point in the main text where the detailed analysis is presented. All citations and sources are listed in the main text.

### PROJECT DESCRIPTION

The study area for the *Berkeley Downtown Plan* is centrally located within the City's boundaries, covers approximately 79 acres and contains 3.8 million square feet of floor space. It functions as a center of major institutional, governmental, retail, office, cultural and entertainment activities servicing Berkeley and the greater Bay Area. The *Plan* divides the study area into five subareas which receive separate policy and regulatory treatment on some topics addressed in the *Plan*.

Three main goals are emphasized in the *Plan*: 1) Express and enhance Berkeley's unique social and cultural character in the Downtown; 2) Create an appealing and safe Downtown environment, with a comfortable pedestrian orientation; and 3) Diversify, revitalize and promote the Downtown economy.

This EIR program analyzes the potential effects of policies and programs of the proposed *Plan* as well as four development alternatives (two of which are variants of the *Plan* itself) at an equivalent level of detail.

The four physical development alternatives have been designed on the basis of the numerous variations in development incentives and regulations (i.e., allowable land uses, maximum square footage and parking requirements) as they apply to a group of 24 parcels having a high potential for eventual redevelopment (Figure 4, p. 30). The assumptions underlying each alternative are listed in Table 1 (p. 29). The parcel by parcel data are presented in Tables 2 through 6 (pp. 33-37). The following list shows the maximum total square footage allowable on the 24 parcels under each alternative as well as the net difference after subtracting-out the existing square footage of development on the 24 parcels:

<u>Alternative Name</u>	<u>Total Square Footage</u>	<u>Net New Square Footage</u>
1. No Action Alternative	2,251,000	2,076,320
2. Downtown Plan - Base Alternative	1,460,800	1,286,120
3. Downtown Plan - Maximum Bonus Alternative	2,033,700	1,859,020
4. Low Intensity Development Alternative	1,255,700	1,081,020

### KEY ENVIRONMENTAL ISSUES

The initial study prepared by staff of the City's Planning and Community Development Department (see Appendix A) identified potential environmental impacts which have been combined into eleven broad topical categories: land use and planning; socioeconomics; urban design and visual quality; transportation; air quality; noise; hazardous waste/toxics; geology, soils and seismicity; hydrology and water quality; public facilities and services; and fiscal

impacts. In addition, the potential for cumulative and growth-inducing impacts was cited as requiring analysis.

Technical subconsultants have undertaken analyses of potential impacts in the areas of transportation, urban design, air quality, noise, hazardous waste, hydrology, soils and seismicity.

## PROJECT IMPACTS AND RECOMMENDED MITIGATION MEASURES

### Land Use and Planning (See pages 43 to 62 below)

Existing Setting. Downtown Berkeley presently includes approximately 3.8 million square feet of space (built space and vacant parcels). Office uses predominate representing 35 percent of this total, followed by commercial businesses (26 percent), auto-related uses (17 percent), residential (11 percent) and institutional uses (11 percent).

Zoning in the Downtown study area is a mixture of C-1, C-2 and C-2'. Adjacent to the study area are residential neighborhoods of various densities (R-2, R-2A, R-4 and R-5).

A wholesale review of the City's Master Plan (last revision, 1977) has recently begun, though a draft revision of the Plan is not expected to be available until late 1990 or early 1991.

A variety of regional and state plans/policies also apply to the proposed *Berkeley Downtown Plan* and are addressed at appropriate topical points throughout the EIR.(see list of cross references on page 43).

Policies and Programs Significantly Affecting Land Use or Planning. Policy and program initiatives with implications for land use and planning include ones with little potential for adverse effects such as those that would create an historic overlay zone, emphasize housing along certain streets, and maintain the City's inclusionary zoning requirement.

Others such as exempting retail uses from the traffic level of service (LOS) D standard and restricting regional retail uses from locating in neighborhood commercial districts could result in more significant changes throughout Berkeley.

The main text of this section of the EIR (*Land Use and Planning*) describes in detail the proposed changes in incentives for and regulations on development. Analysis of the physical effects of these policies and programs as exemplified by the *Plan*-based alternatives is presented in the other topical sections of Chapter IV.

Impacts Due to New Development Allowable Under the *Plan*. No significant adverse impacts would result from either of the two *Plan*-based alternatives or the Low Intensity Alternative. The additional growth and land use changes would be mitigated by a series of policies and programs included in the *Plan* (and detailed throughout this EIR). For instance, the *Plan* includes proposals for a growth management plan, mitigation fees and parking facilities. In addition, this EIR recommends measures to mitigate other potential impacts which threaten the compatibility of new development with existing uses of the Downtown and with adjacent neighborhoods.

Continuation of current policies and growth trends as exemplified by the No Action Alternative would represent a land use future and a planning process that is unacceptable to many Downtown residents, employees and visitors. In fact, it is the potential experience of this alternative that has led to the initiation of the Downtown Plan process. Therefore, the land use incompatibility impacts of this alternative are adverse by definition.



Public Improvements or Program Mitigation Measures Included in the *Plan*. Two major program mitigation measures would serve to lessen impacts of growth in the Downtown area and vicinity: revising the zoning ordinance to provide for mitigation of traffic impacts and the element of the *Downtown Plan* addressing the relationship of the City with the University of California, Berkeley.

Additional Mitigation Measures Recommended by this EIR. A series of questions about the *Plan's* effectiveness and impact on the planning process in Berkeley are also analyzed in the main text below (pp. 50 to 58 ) and are linked with recommended mitigation measures. However, most of these factors do not reach the threshold level of significance for environmental impacts under CEQA, and those that do, can be mitigated through monitoring of the *Plan's* effects and additional study by staff as needed.

Socioeconomics (See pages 63 to 78 below)

Existing Setting. The Downtown study area presently provides about 7,900 total jobs. The nearby University of California employs nearly 11,000 persons. As summarized in a background report prepared by City staff, this heavy public sector presence "provides a stabilizing influence on the Downtown economy". Private sector jobs are focused in the services and retail trade categories (83 percent of the total). Of those persons hired for newly generated jobs, it is estimated that about 30 percent would be either existing Berkeley residents or would move into Berkeley after being hired.

The Downtown area includes a residential population of about 880 persons, a level that has remained about even since the 1980 census. Housing data for the Downtown study area are neither current nor reliable, but based on the available population data, it is possible to estimate that the Downtown includes somewhere between 500 and 700 housing units (including residential hotel rooms). Citywide vacancy rates are estimated at between 1.0 and 2.0 percent for owner-occupied units and below 1.0 percent for rental units.

Policies and Programs with Socioeconomic Consequences. One program and one objective could result in significant effects on Downtown development, though neither is defined in great enough detail in the *Plan* for a clear conclusion. The program proposes to expedite permit processing for housing construction, which could, unless additional resources are devoted to the overall function of permit processing, tend to extend the length of time required for processing other projects. The objective with potentially adverse socioeconomic consequences is one which states that "all public and private development Downtown contribute positively ... and pay its share of the costs and impacts". Strict application of this objective to such projects as housing might conflict with other land use and social goals and objectives, as certain land uses may not pay their own way.

Impacts Due to New Development Allowable Under the *Plan*. Each alternative would lead to different levels of growth in Downtown employment and population, citywide population and citywide demand for housing and childcare services, and only one significant adverse impact could result from implementation of the *Plan*.

The impact remaining after implementation of the *Plan* and its programs involves the potential for persons whose income levels exclude them from participating in programs for low- and very-low income households to be adversely effected by increased pressures on the local housing market.

Public Improvements or Program Mitigation Measures Included in the *Plan*. The *Plan* proposes the establishment of a fee schedule for mitigation of housing impacts. It also proposes concentrating the expenditure of these funds in the Downtown area. The first source employment program is also discussed, as is a proposal to consider the need for and provision of incubator space for startup businesses.

#### Additional Mitigation Measures Recommended by this EIR

In addition to the programmatic mitigation measures included in the *Plan* (e.g., housing, first source hiring, transportation, childcare and rental space serving to incubate new businesses) this EIR recommends that the City examine some method of phasing development to insure that moderate income households not be adversely effected by rising housing prices associated with new growth.

#### Urban Design and Visual Quality (See pages 79 to 126 below)

Existing Setting. Much of the historic context of Downtown Berkeley has been retained over the years and today 74 of the 186 buildings within the study area are included in the State historic resource inventory; 26 are designated as City landmarks and 8 are on the National Register of Historic Places (see Table 14 and Figure 10).

The Downtown includes several major view corridors which, when mapped (see Figure 15), cover most of the unbuilt area of the study area. The views from Downtown are of the Hills to the east and of San Francisco Bay and beyond to the west. External views of the Downtown show that its buildings generally blend in with their urban landscape. The 12-story Wells Fargo and Great Western Building provides a reference point for the study area from distant locations.

Martin Luther King Jr. Park is the only large open space area in the Downtown. It is supplemented by small outdoor sitting areas that are highly popular, particularly during the lunch hours. However, some of these areas are made less hospitable during the winter months when sunlight access is reduced. The pedestrian environment is occasionally congested by the presence of newspaper racks and free-standing garbage receptacles.

Policies and Programs Significantly Affecting Urban Design and Visual Quality. In terms of urban design and visual impacts, new physical development allowed under the four alternatives is the focus of this analysis.

Impacts Due to New Development Allowable Under the *Plan*. Though the purpose of this EIR is not to critique the *Plan*'s effectiveness or rewrite its programs, several aspects of the *Plan* may not serve their mitigatory function unless they are clarified or strengthened. These are described in detail in the main text.

Potential impacts in each of the critical view corridors are discussed in the main text. Also analyzed are solar access impacts on pedestrians and the issue of limited provision of open space for pedestrians using the Downtown.

Public Improvements or Program Mitigation Measures Included in the *Plan*. Numerous recommendations are included in the *Plan* to address the historic qualities of the Downtown. The Historic Overlay Zone (see Figure 8) is one. Another is the list of criteria for use in the review of changes to historic Downtown structures. The main text (pp. 122 and 123) evaluates these mitigatory proposals and makes minor recommendations for their refinement.



Additional Mitigation Measures Recommended by this EIR. A series of recommendations are provided aimed at clarifying and refining the occasionally general policies and programs, so that the full mitigatory effect of the *Plan* could be insured.

Several corridor- and parcel-specific recommendations are provided to deal with impacts to persons in each view corridor and pedestrians throughout the Downtown.

Transportation (See pages 127 to 164 below)

Existing Setting. According to analysis of the existing levels of service at Downtown intersections, all signalized intersections operate at an overall level of service (LOS) of D or better, and in fact, only three intersections operate in the LOS categories of C and D for their overall operations (the rest operating in the LOS B range). However, three individual turn movements within the overall intersection operations function at unsatisfactory levels of service (LOS E or F).

At the unsignalized intersections in the Downtown area, all through movements on, and turning movements from, north/south streets are presently operating at LOS C or better. Through movements on, and left turning movements from, the minor east/west streets are operating between LOS D and F during the PM peak commute period.

Information on the available supply of public parking shows that is nearly at capacity at midday and close to it in the morning hours. Abuse of parking restrictions impedes traffic flow, blocks bus stops and encourages delivery trucks to double park. Heavy dependence by Downtown employees and visitors on available parking in adjacent neighborhoods has resulted in the implementation of the Residential Permit Parking (RPP) program. The RPP program is being expanded by the City to cover other neighborhoods as well. However, persons displaced from parking in the neighborhoods may react in any of several ways to the RPP program. These reactions include: (1) continue to park outside the RPP zone and walk in; (2) park in the Downtown in off-street facilities; (3) change mode of arrival to transit; (4) move their vehicle every two hours; or (5) park outside the Downtown and complete their trip into Downtown on transit. Studies have estimated that the size of the second group could reach anywhere from 35 to 260 and that, in attempting to park in the Downtown, these persons could displace short term parkers.

The Downtown study area is relatively well served by a variety of public transit agencies including AC Transit, BART, the University sponsored shuttle service and taxicabs. In addition, the local ridesharing coordinator, Berkeley TRiP, is located Downtown.

Pedestrian facilities are clearly marked and signed in the Downtown, with fifteen of sixteen intersections equipped with pedestrian crossing signals. While most sidewalks can accommodate existing pedestrian volumes, four problem areas have been identified. These problem areas involve a lack of consistency in pedestrian signals in the Downtown, insufficient crossing time for pedestrians with impaired mobility, sidewalk obstacles and some conflicts between heavy pedestrian and vehicular movements at unsignalized intersections.

Policies and Programs Significantly Affecting Transportation. Within the Circulation and Transportation Element of the *Plan* there are six major objectives emphasizing a pedestrian-oriented Downtown with reduced reliance on the single-occupant auto, while maintaining acceptable levels of service on the transportation infrastructure. Each objective has its own implementing policies. Programs to implement these policies fall into the categories of ordinance and regulatory changes, studies, short range capital improvements and long range capital improvements. Analysis of the policies and programs has shown that in only three cases are new policies proposed that do not appear to be supported by one of these four types of programs.

In addition to noting the three policies that are unsupported by programs, the *Transportation* section of Chapter IV (pp. 127 to 164) discusses in detail the potentially adverse effects of proposed programs as well as instances in which programs should be clarified further.

Impacts Due to New Development Allowable Under the *Plan*. Trip generation, intersection levels of service, traffic on regional corridors, transit, parking and transportation systems management (TSM) are all addressed below.

The four alternatives analyzed by the EIR transportation consultant would result in the following net new trip generation in Downtown Berkeley:

<u>Alternative</u>	<u>Auto Trips</u>	<u>Transit Trips</u>	<u>Bike/Walk Trips</u>
No Action Alternative	1,800	800	400
Base Alternative	2,100	800	500
Maximum Bonus Alternative	3,300	1,200	800
Low Intensity Alternative	760	300	200

After taking into account the traffic from cumulative development elsewhere in Berkeley and at the University, the levels of service at signalized intersections were calculated for each of the four *Downtown Plan* alternatives. Overall intersection levels of service during the peak period would be LOS C or better at all intersections, for each alternative, except in the following cases:

- |  |   |
|--|---|
| <input type="checkbox"/> No Action Alternative     | One intersection would operate at LOS D.                |
| <input type="checkbox"/> Base Alternative          | Three intersections would operate at LOS D.             |
| <input type="checkbox"/> Maximum Bonus Alternative | Two intersections would operate at E and four at LOS D. |
| <input type="checkbox"/> Low Intensity Alternative | No exceptions. All overall levels at C or better.       |

In addition to these overall levels of service, one or more turning movements at some intersections would operate at unsatisfactory levels in the case of every alternative:

- |  |                     |
|--|---------------------|
| <input type="checkbox"/> No Action Alternative     | Three intersections |
| <input type="checkbox"/> Base Alternative          | Three intersections |
| <input type="checkbox"/> Maximum Bonus Alternative | Four intersections  |
| <input type="checkbox"/> Low Intensity Alternative | Three intersections |

The effect of this Downtown traffic on the regional corridors that flow through Berkeley would be to exacerbate the delays that would result from the addition of all the cumulative traffic to the existing already congested conditions. For those corridors presently operating at capacity, increased peak period traffic would extend the peak period.



Transit ridership would increase by 800 persons for both the No Action and Base Alternative. The Maximum Bonus Alternative would generate 1,200 transit trips, while the Low Intensity Alternative would result in by far the fewest transit trips at 300. Even after accounting for the ridership increase expected to result from the implementation of the Residential Permit Parking (RPP) program, these increased levels would not constitute a significant impact on either AC Transit or BART.

The issue of parking supply and demand is one of the most complex facing Downtown Berkeley. The proposed parking requirements vary under each alternative (both in terms of the ratio of required spaces per 1,000 square feet of development and the exemptions allowed). The supply to be provided also varies by alternative.

The parking supply and demand projections for each alternative are shown below in a condensed version of Table 29 from the *Transportation* section of Chapter IV.

<u>Alternative</u>	<u>Supply</u>	<u>Demand</u>	<u>Shortage</u>
No Action Alternative	2,726	3,038	-312
Base Alternative	2,027	2,532	-505
Maximum Bonus Alternative	1,843	2,976	-1,133
Low Intensity Alternative	1,633	1,945	-312

It should be noted that these projected shortages include the adverse effects of existing Downtown parking shortages and exclude the beneficial effects of the *Plan's* TSM program.

The TSM program would be part of both of the two *Plan*-based alternatives. In order to be effective, it must be implemented along with the proposed parking management plan and the reduced parking ratios. The goal of the TSM program is to increase the non-single occupant vehicle mode split from 50 percent to 60 percent of all person trips. If achieved, this mode shift would reduce the Base Alternative's total auto vehicle trips in the PM peak period from 2,068 (as shown in Table 30) to 1,654. The reduction for the Maximum Bonus Alternative would be from 3,295 to 2,627. No adverse impacts on transit would result from mode shifts of this magnitude. Full achievement of these TSM goals would also reduce the shortage of parking spaces produced by the reduction of parking supply ratios and the exemption of large retail projects in the core subarea. Under the Base Alternative, the shortage would decrease to 45 spaces. Under the Maximum Bonus Alternative, a shortage of 428 spaces would remain.

Public Improvements or Program Mitigation Measures Included in the Plan. The *Transportation* section of Chapter IV also outlines the programs and intersection improvements that are proposed as part of the *Plan* to improve conditions in the Downtown.

Additional Mitigation Measures Recommended by this EIR. Twelve mitigation measures are recommended to address potential impacts of the policies and programs in the *Downtown Plan*. Five additional measures are listed to mitigate impacts caused by development allowed under the alternatives. Key mitigations include:

- ☐ Removing the exemption of retail uses from the level of service (LOS) D standard.
- ☐ Refining several other aspects of the LOS standard and its implementation.
- ☐ Establishing an efficient and equitable method for funding intersection improvements.
- ☐ Modifying several aspects of the proposed parking requirements, including retention of the 2.0 spaces per 1,000 ratio and removal of the exemption for large new developments in the core subarea and changes in use to retail.



- Refining the parking in-lieu fee program to account for cost inflation.
- Determining the location and means of financing parking facilities.
- Addition of turn lanes at selected intersections.

Air Quality (See pages 165 to 171 below)

Existing Setting. Though air quality data are not available for the City of Berkeley, data for two other nearby monitoring stations (in the cities of Richmond and Oakland) provide a good indication of the ambient air quality levels in urbanized East Bay locales. These data indicate that, with the exception of ozone and inhalable particulates, air quality meets state and federal standards. Modeling of the ambient carbon monoxide (CO) concentrations at twenty local intersections shows that these background CO levels would violate neither the state nor federal standards for CO.

Policies and Programs Significantly Affecting Air Quality. The policy of insuring adequate vehicular access to/from and within the Downtown area, if it were to increase the number of single-occupant vehicles in the Downtown, could cause greater congestion, delays and a worsening of air quality. Encouraging pedestrian and bicycle use could also lead to greater conflicts with vehicles in turn leading to delays for vehicles and greater emissions, unless a careful integration of the travel patterns of each mode is achieved.

Impacts Due to New Development Allowable Under the Plan. All four alternatives would result in the following general impacts:

- Heavy equipment used during demolition, excavation and construction would emit hydrocarbons, carbon monoxide, nitrogen oxides, sulfur oxides and total suspended particulates.
- Large amounts of fugitive dust would be emitted.
- Because all 24 parcels with additional development potential are located on or adjacent to a site with either a history of hazardous material use or presence of registered underground storage tanks, the possibility exists of encountering contaminated soils and subsequently releasing these materials into the air during excavation.

Analysis of the potential carbon monoxide impacts of the traffic volumes produced by each of the four development alternatives shows that the Maximum Bonus Alternative would reach, though not exceed, the eight-hour state and federal standards. Other alternatives would be slightly below the eight-hour standards and all alternatives would be well-below the one-hour standards. According to Bay Area Air Quality Management District (BAAQMD) guidelines, emissions of hydrocarbons and nitrogen oxides for all but the Low Intensity Alternative would be considered significant. In addition, the emissions of total suspended particulates under the Maximum Bonus Alternative would also be significant.

Public Improvements or Program Mitigation Measures Included in the Plan. The proposed street cleaning program would reduce total suspended particulate matter generated by vehicular traffic. In addition, the policies of encouraging transit use, relocating parking outside of the Downtown and decreasing the number of single-occupant vehicle trips would all be implemented through programs with beneficial air quality impacts.

Additional Mitigation Measures Recommended by this EIR. Measures are recommended for impacts that would result from demolition, construction, traffic and the potential release of hazardous materials into the air.

## Noise (See pages 171 to 178 below)

Existing Setting. The noise environment of Downtown Berkeley is typical of many urban communities. Measurements of the ambient noise levels at six different locations throughout the Downtown range from 67 decibels (dB) to 71 dB. Over a dozen sensitive noise receptors (such as residences, hotels, educational institutions and the city library) have been identified in the Downtown study area. The City of Berkeley Noise Ordinance sets forth standards for noise, as does the State of California and the Federal Highway Administration.

Impacts Due to New Development Allowable Under the Plan. Construction period noise would be noticeable at any noise sensitive receptors located within 400 feet of a construction site. Operation period noise levels (primarily resulting from traffic) at buildout of the study area would increase between 1 dB and 2 dB at the various noise sensitive receptors in the Downtown. This increase would not be noticeable. However, noise levels experienced at some locations could exceed applicable standards unless protective measures were taken.

Additional Mitigation Measures Recommended by this EIR. Several construction period mitigation measures are recommended. In addition, acoustical noise studies would have to be undertaken for sites with noise levels greater than 60 dB. Other design mitigations are also recommended for new development.

## Hazardous Waste/Toxics (See pages 179 to 188 below)

Existing Setting. The study area includes properties that have a history of businesses known to have used supplies and materials that pose a contamination potential. Such land uses as dry cleaning establishments and auto repair shops, as well as underground tanks used for heating oil (approximately 20 to 30 in the Downtown area), are examples of contamination sources. The main text lists parcels on which hazardous materials are suspected of having been used (Table 37, p. 181) and locates them (Figure 39).

An investigation of the files of local, regional and state regulatory agencies produced eight sites within the study area that are contaminated (See Figure 40 and Table 38). All twenty-four parcels listed as having additional development potential are located on or adjacent to a site with historical hazardous material use. In addition, seven of these parcels are located on or adjacent to identified contamination sites on file with the regulatory agencies, or sites of registered underground storage tanks (see Figure 42).

Policies and Programs with Implications for Hazardous Waste/Toxics. Nothing in the proposed *Plan* would lead to increased risks due to hazardous wastes or toxic materials as long as existing City, regional and state regulations are followed and the mitigation measures recommended below fully implemented.

Impacts Due to New Development Allowable Under the Plan. Applying equally to each of the four alternatives, the possibility exists of encountering contaminated groundwater, soils and as yet unidentified underground storage tanks during construction period excavation.

Public Improvements or Program Mitigation Measures Included in the Plan. The *Plan* proposes a detailed study to determine the location of and potential for contamination from as yet unregistered underground storage tanks. The gradual shift in auto-related businesses, large printing facilities and other industrial land uses from the Downtown would have a beneficial effect on the future impacts from hazardous wastes/toxics in the study area.



Additional Mitigation Measures Recommended by this EIR. The *Downtown Plan* proposes that a study be undertaken to identify the location of underground storage tanks and possible accompanying contamination.

This EIR recommends that the City require more detailed and site-specific pre-construction studies to investigate historic uses of sites (on which new construction is proposed) to determine if contamination exists. It also recommends that a City inspector visit any development requiring excavation to determine if any visible signs of soils or groundwater contamination are present. In the event contamination were found, remedial steps are also outlined.

Geology, Soils and Seismicity (See pages 189 to 197 below)

Existing Setting. Faults and earthquakes are found throughout the San Francisco Bay region. Several active branches of the San Andreas Fault cross through the region (see Figure 44), including the Hayward Fault which runs along the western side of the Berkeley-Oakland Hills and passes within three-quarters of a mile of the study area. Many other faults are also located with the region (see Table 39 for a complete list). The maximum ground shaking that can be expected to result from an earthquake in the study area is categorized as "strong" by the Association of Bay Area Governments (see Figure 45). The risk of the related seismic hazard of liquefaction would be "low". The Downtown study area is located outside of any Alquist-Priolo designated zones.

Policies and Programs with Implications for Geology, Soils and Seismicity. The *Downtown Plan's* numerous policies aimed at retaining historic buildings include utilizing the State Historic Building Code, which exempts designated buildings from the more stringent regulations of the City's building code. This could, however, increase the risks of exposure to seismic hazards for the occupants and the public outside of these structures. A related suggestion in the *Plan* is that buildings along Shattuck Avenue be faced with specified materials. Unless the installation of such facing meets the requirements of the Uniform Building Code, it could present a serious risk to pedestrians in the event of a large earthquake.

Impacts Due to New Development Allowable Under the Plan. New construction could cause increased sediment loading and decreased efficiency of operation in City storm drains if soils from excavation are ever improperly stored. There remains some risk to structures in Downtown Berkeley from ground shaking during an earthquake and a slight risk from settlement in response to liquefaction.

Public Improvements or Program Mitigation Measures Included in the Plan. The *Plan* calls for promoting earthquake reinforcing of older and historic buildings and an inventory of buildings and their associated level of risk in the event of an earthquake.

Additional Mitigation Measures Recommended by this EIR. The EIR recommends three additional mitigation measures: (1) soils that are stockpiled during the rainy season should be covered and bermed to decrease the risk of their being washed into storm drains and increasing sedimentation; (2) new development should be designed in compliance with the seismic requirements of the most current Uniform Building Code and after incorporating the recommendations of a qualified geotechnical engineer; (3) historic buildings within the Downtown should be reinforced in compliance with the most current designated Uniform Building Code (the State Historic Building Code should not be used).



## Hydrology and Water Quality (See pages 198 to 203 below)

Existing Setting. No part of the study area is within a 100-year flood hazard zone. Local street drainage is controlled by a network of storm sewers which perform well when maintained properly. However, accumulated trash has in the past clogged drains and caused localized street flooding.

The ground water level in the study area is approximately 20 feet below the surface. This level varies throughout the area and over the year. Some infiltration of sewers during the wet weather occurs as does leakage of wastewater into the groundwater during the dry season. A 20-year program to repair and replace leaking sewer lines is underway.

Strawberry Creek flows through the University of California campus and into the study area (see Figure 47), exhibiting rapid runoff during storms. During times of low flows, the Creek experiences elevated levels of nutrients and fecal coliform bacteria near the lower campus area. Solids and trace metals are also discharged from cooling towers on campus and hot water is drained into the Creek from the campus heating plant. During wet weather, water quality deteriorates due to urban runoff.

Policies and Programs with Implications for Hydrology and Water Quality. The variety of policies that collectively could attract more pedestrians to the Downtown could also increase the amount of litter that accumulates in storm drains and sewers, as well as increase the volume of wastewater generated. The uncovering of Strawberry Creek could also result in increased exposure to flooding or bacteria, as well as increased costs for trash and silt removal and responses to accidental spills in the Creek. These impacts would be addressed in the feasibility study for Strawberry Creek that is proposed in the *Plan*.

Impacts Due to New Development Allowable Under the Plan. The *Plan* includes a variety of policies and programs that would increase use of the area by attracting more people, creating a 24-hour environment, and encouraging more pedestrian activities. This increased use may effect the amount of litter that accumulates in the storm drains and sewers, increasing the risk of flooding from clogged drains.

The potential effects of a feasibility study to uncover Strawberry Creek depend upon the outcome of the study. Should the study recommend uncovering the existing culvert or original stream, adverse impacts to water quality and hydrology could result.

The additional parking facilities proposed to accommodate new development and common to one or more alternatives are unlikely to increase the volume of runoff, because almost the entire study area currently has a runoff coefficient that is similar to a parking facility.

Public Improvements or Program Mitigation Measures Included in the Plan. A street cleaning program and increased litter collection efforts are called for in the *Plan* and could mitigate the potential for increased clogging of drains due to increased litter from additional Downtown population and employment.

Additional Mitigation Measures Recommended by this EIR. The EIR recommends two additional mitigations. First, in order to address any negative features of opening the existing culvert the City should analyze new routes for a channel through downtown and should design it in such a way that the existing culvert could be retained to carry storm water flow (which is usually of degraded quality). Several design criteria and objectives are set forth in the main text. The City should also monitor bacterial contamination to determine if health hazards continue to exist.

Second, the City should insure that the current program of sewer repair and improvement will be adequate to handle increased wastewater volumes that may be caused by the *Downtown Plan*.

#### Public Facilities and Services (See pages 204 to 212 below)

Existing Setting. Downtown Berkeley is served by municipal departments that provide Police, Fire, Sewer and Solid Waste facilities and services. Water supply is provided by the East Bay Municipal Utility District (EBMUD).

Policies and Programs with Implications for Public Facilities and Services. Potential adverse effects of policies and programs in the *Plan* on public services are addressed in terms of the physical development they would encourage or allow.

Impacts Due to New Development Allowable Under the Plan. Impacts on five services are considered.

In order to maintain Police services to retail and commercial outlets in the Downtown, at least one additional foot patrol officer would have to be added; the level of population growth allowable under the Maximum Bonus Alternative would require three additional officers.

Impacts on the Fire Department would depend on the type of buildings constructed in the Downtown: high-rise buildings would increase the inspection efforts of the Department. Emergency medical responses to the area would also increase to the point that one additional paramedic would be required.

Neither water supply, sanitary sewer nor solid waste disposal services would experience significant adverse impacts.

Public Improvements or Program Mitigation Measures Included in the Plan. Increased police foot patrols and the general increase in pedestrians in the Downtown would tend to make the area more secure. Additional fire regulations for new construction and renovation are proposed which would decrease the risk of fire and injury to building occupants. The growth management program implies that water supply and sewer facilities would have to be assured before new development could take place.

Additional Mitigation Measures Recommended by this EIR. The main text below lists a variety of recommendations aimed at insuring that not only are the potential impacts kept at below significant levels, but that the numerous benefits of the *Plan* are fully captured.

#### Fiscal (See pages 213 to 226 below)

Introduction and Existing Setting. The main text of this EIR provides a detailed discussion of the purpose of comparing the four alternatives in fiscal terms, an outline of the methodology underlying such a comparison, a review of the City's current conditions and a brief discussion of the fiscal effects of recent trends in Downtown Berkeley.

Policies and Programs with Fiscal Implications. Throughout the *Plan*, policies and programs are proposed that would result in fiscal consequences. Some would cost money and others would enhance municipal revenues. Many new policies and programs would apply equally across all four development alternatives; twenty-six separate items are identified and described in terms of its proposed funding source and responsibility for implementation. These items are presented in the *Plan* at varying levels of specificity, precluding a definitive calculation of their capital or operational costs.

Impacts Due to New Development Allowable Under the Plan. The physical development, employment and population growth allowed under each of the alternatives would lead to higher costs as well as revenues. The annual costs of providing public services after buildout would vary among the alternatives by a factor of two. Annual revenues generated by the major tax and fee sources would involve a difference of nearly three times between the lowest revenue-generating option and the highest. Only the Low Intensity Alternative would fail to create a positive fiscal return to the City (due to its emphasis on residential uses which typically require more in the way of services than they generate in revenues); the No Action, Base and Maximum Bonus Alternatives would all lead to net fiscal benefits on an annual basis.

The one-time Transportation Services Fees are projected to generate substantial levels of funding for capital improvements as well.

Table 44 compares the annual fiscal effects of the four alternatives.

Additional Mitigation Measures Recommended by this EIR. As with other environmental topics evaluated in this EIR, it is recommended that, prior to implementation of the programs and capital improvements outlined in the *Fiscal* section below, staff should refine cost estimates and determine financing mechanisms.





## CHAPTER III

### PROJECT DESCRIPTION

#### LOCATION OF THE PROJECT

The study area for the *Berkeley Downtown Plan* covers approximately 79 acres in an area generally west of the University of California campus and (with minor exceptions) south of University Avenue, with a focal point being the BART Station at the intersection of Shattuck Avenue and Center Street. Figure 1 provides a regional view of Berkeley's location, and of the *Downtown Plan* study area within the overall city boundaries. Figure 2 displays the study area boundaries and serves as the base map for other figures in this report.

The Downtown area contains approximately 3.8 million square feet of floor space, of which 1,345,000 square feet are office space, 404,000 square feet are institutional (including government) space, 801,000 square feet are in retail uses, 90,000 are in auto-related uses, 228,000 square feet are services and 435,000 square feet are residential. It functions primarily as a center of major institutions and government agencies, retail, office, cultural and entertainment activities, and to a lesser extent, housing.<sup>1</sup>

The study area has been divided into five subareas: the Central Core and four Transitional Edges/Buffer Zones. The latter are the Oxford Edge, the West Edge/Civic Center, South Shattuck corridor and the North Edge/University Avenue. Figure 3 shows the boundaries of each of the subareas. The current characteristics of each subarea are examined further below in Chapter IV, in the *Land Use and Planning* section (p. 32).

#### RECENT HISTORY AND CHARACTERISTICS OF DOWNTOWN BERKELEY: IMPETUS FOR THE PLAN

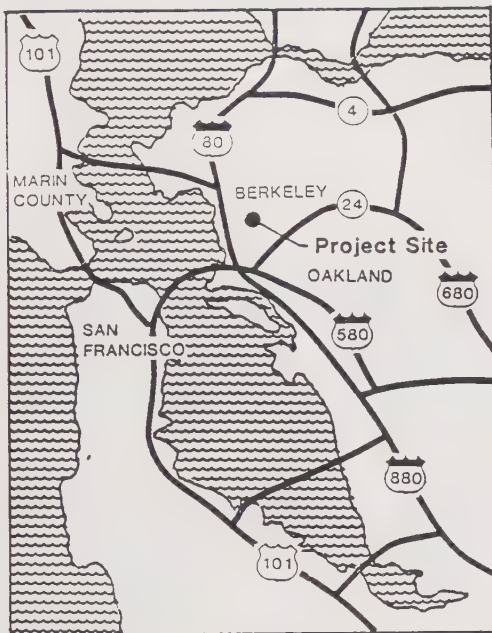
##### Berkeley's Downtown Remains Intact

Development of Berkeley's Downtown was begun in the 1870's with intensive development occurring after the turn of the century and again in the 1920's and 1930's. Since then there has not been extensive change except for the remodeling of facades and small surges of development in the 1970's and 1980's. As noted in the *Historic Preservation and Urban Design* section of the *Plan*, Berkeley escaped the massive demolition and urban renewal that transformed many California cities. For this reason and due partly to the abundance of small and irregularly shaped parcels, the historic scale of Downtown has been retained over the years.

A historic resources survey of Downtown Berkeley's architectural heritage indicates that more than fifty percent of the properties in the downtown district qualify as historic or contributing structures. Of these buildings, 8 are listed on the National Register of Historic Places, 74 are included in the State Historic Resources Inventory and 26 are City Landmarks.<sup>2</sup>

<sup>1</sup> *Berkeley Downtown Plan*, February 1988, page 8.

<sup>2</sup> *Ibid.*, page 9.

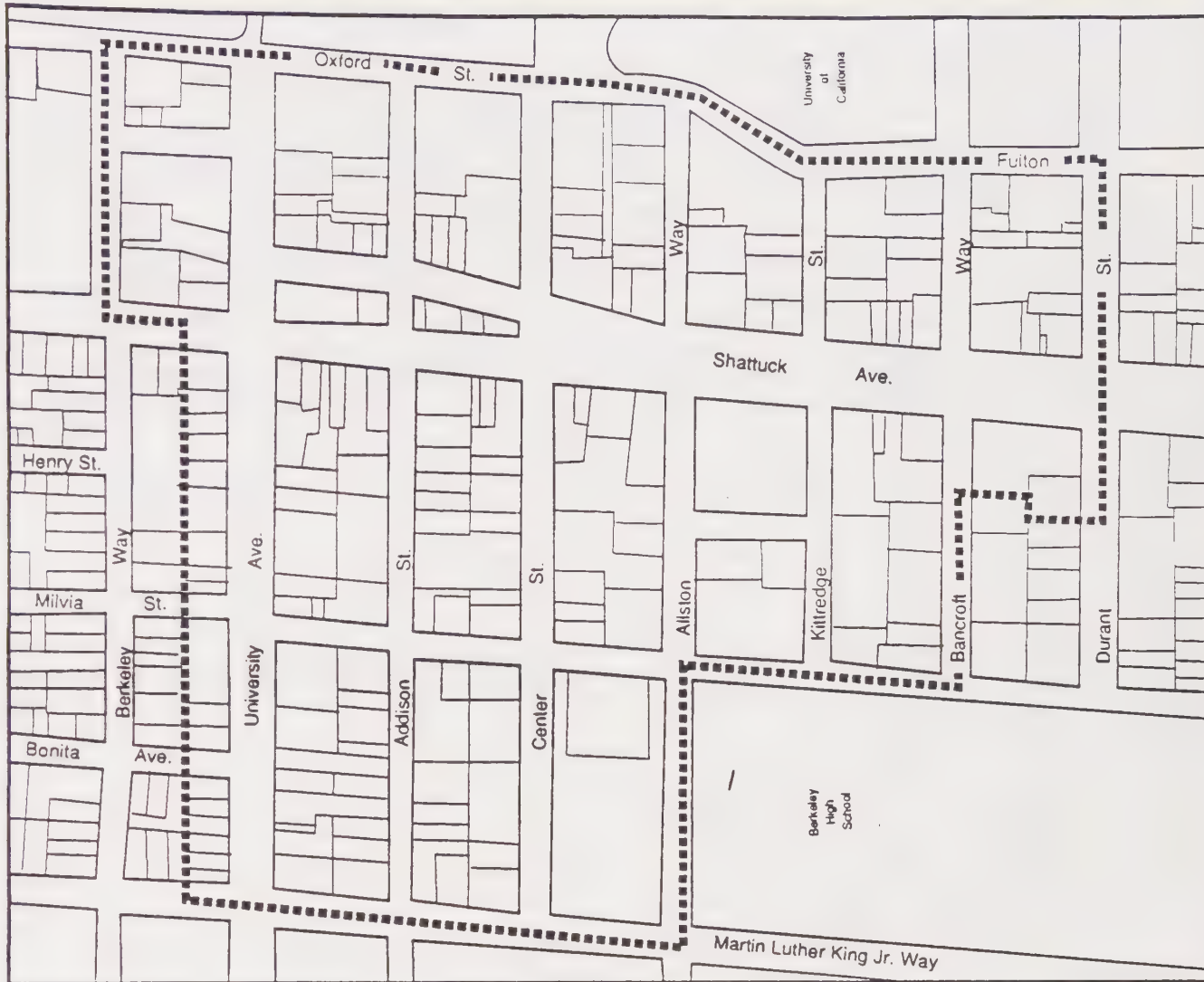


**Regional Location**

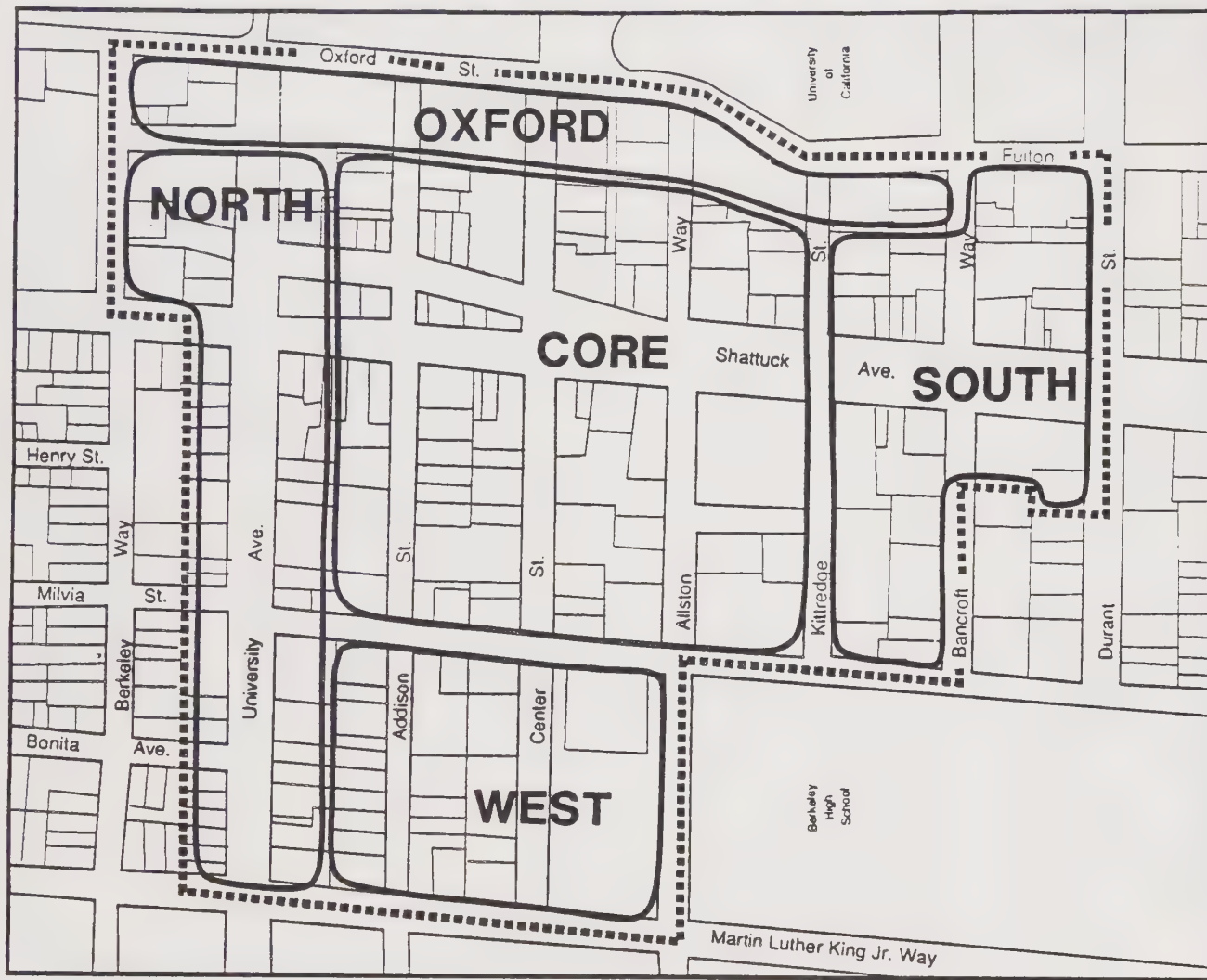


**Figure 1**  
**Project Location**





**Figure 2**  
**Berkeley Downtown Plan Study Area**



**Figure 3**  
**Subareas**



## Study Area Context: The Base Case

For the purposes of this EIR, the base case or "No Project Alternative"<sup>3</sup> in CEQA parlance, is represented by the level of development that currently exists in the Downtown study area in general, and in specific on those properties on which existing development is substantially less than that allowable under either existing zoning or under the proposed *Plan*.

As described throughout this report, the level of environmental impacts generated by existing uses on properties likely to undergo change with adoption of the *Plan* is relatively small; in fact, one could argue that current impact levels in some topical areas are so small as to be within the margin of error of the analysis and therefore practically irrelevant. For instance, several parcels in Downtown Berkeley are either vacant or include less than 10,000 square feet of developed space and would be allowed 5-10 times that much development under any of the four alternatives evaluated. Despite this situation, the first step in analysis of quantifiable topics has been to estimate existing impact levels.

Detailed descriptive data on this base case is provided in Table 2 and accompanying text.

---

<sup>3</sup> Recent court decisions have generally required that environmental impact reports use existing conditions as the standard of comparison for plan-based projects (such as Berkeley's proposed *Downtown Plan*), rather than the allowable impacts that could have resulted from continued implementation of previous plans. Unfortunately, the terminology used by the courts when referring to these comparisons is not entirely consistent. But the courts have clearly agreed that semantics are less important than substantive performance.

This EIR uses the term "base case" and "no project" interchangeably to refer to existing physical conditions and the term "no action" to mean a continuation of the present policies and regulations. A No Action Alternative is formally analyzed in this report. The no project condition is presented in the *Setting* sections of each environmental topic. The impacts of each alternative are described in terms that are net of the existing conditions. In the case of environmental topics which can be quantified, impacts are first defined in terms that are net of existing conditions and then related back to those existing conditions (either as a percentage change or an absolute change). They are often related among alternatives as well.



## A Downtown Plan is Sought

For many years residents, merchants, advocates of historic preservation and city staff have felt that undesirable conditions exist Downtown, or that opportunities for betterment have not been pursued. Distilling these attitudes from background materials prepared for the *Berkeley Downtown Plan* reveals the following points:

- ❑ Current guidance provided for planning and development review in the Downtown through the existing Master Plan and Zoning Ordinance does not provide enough detail to be of assistance to decisionmakers.
- ❑ The existing documents aim to *regulate*, but do not provide a *vision*, of what Downtown should be.
- ❑ The significant number of historic buildings located in the Downtown may not be adequately protected from the adverse effects of nearby new development or from demolition for new development.
- ❑ The combination of the physical character of Downtown alongside the social and cultural diversity of the resident population, workers, shoppers, students and street people may not be adequately protected by existing plans and policies.
- ❑ The scale of Downtown buildings does not help define its function and its boundaries are not articulated in ways that create a sense of place.
- ❑ Some institutional uses in the Downtown operate outside of City land use regulations, yet hold the potential to play a strong positive or negative role in the future of the Downtown.
- ❑ Litter is a problem, natural open spaces and urban landscaping are sparse, and there are few bike storage facilities in the Downtown.
- ❑ Heavy peak hour traffic (including a large amount of through traffic) creates congestion, dangerous conditions for pedestrians and localized air pollution.
- ❑ Off-street parking capacity is utilized by a high proportion of long-term rather than short-term parkers, and spillover of parking into adjacent neighborhoods occurs.
- ❑ The Downtown is underutilized for cultural and entertainment activities, as a potential location for new housing, and as a generator of new jobs for Berkeley residents.
- ❑ The growth that will occur in future years is not linked adequately to the capacity of existing and proposed infrastructure, or the provision of other public services.

This summary of key themes underlying the need for a new *Downtown Plan* is meant to illustrate the kinds of concerns which have framed the public discussion and informed the substance of the *Berkeley Downtown Plan*; the *Plan* itself sets forth these points and others in greater detail.

## PROJECT CHARACTERISTICS

### Overview of Downtown Plan Goals and Objectives

The *Berkeley Downtown Plan* emphasizes three main goals:

1. **Express and enhance Berkeley's unique social and cultural character in the downtown.**
2. **Create an appealing and safe downtown environment, with a comfortable pedestrian orientation.**
3. **Diversify, revitalize and promote the downtown economy.**

Within each of the seven topical elements of the *Plan*, these goals are operationalized through the specification of proposed governmental objectives and policies. The implementation of the policies is made even more explicit through recommendations for individual programs which include revising city ordinances and regulations, establishing new advisory committees, constructing infrastructure improvements, recommending further studies and suggesting financing mechanisms.

Rather than reiterate the objectives, policies and programs of the *Berkeley Downtown Plan* in detail, this EIR should be read alongside the *Plan*, where the reader can view the complete presentation of these items.

### Development Regulations and Incentives in the Downtown Plan

The regulations and incentives that would guide Downtown development under the proposed *Plan* are complex and vary by subarea. Furthermore, analysis in this EIR includes not just the proposed *Plan*, but other scenarios arising out of modifications to specific regulations such as the allowable floor area ratio, maximum building heights and required parking standards. Before outlining the regulations and incentives that make up the *Plan*, the four alternatives are introduced.

### Introduction to Four EIR Alternatives

Four different development alternatives are examined at an equivalent level of detail in this program EIR. Two alternatives have been specified to represent the range of physical development that could occur under the proposed *Plan*. Were this study an EIR on an individual development proposal, these two scenarios would represent the "project". However, the variance in buildout potential, land use types and other characteristics of Downtown Berkeley's future under the *Plan* suggest the appropriateness of analyzing not one, but two, plan-based "projects".

An alternative of reduced total development is also considered. With the exception of the No Action Alternative, each represents a greater or lesser level of net physical development which would be allowed under the various regulations and incentives composing the *Plan*. The four EIR Alternatives include the following:

1. **No Action Alternative (Existing Policies and Regulations)**
2. **Downtown Plan - Base Alternative**
3. **Downtown Plan - Maximum Bonus Alternative**
4. **Low Intensity Development Alternative**



## Development Assumptions Underlying EIR Analysis

According to the *Plan*, the Downtown's central core subarea is relatively built out, with only 3.9 acres of potential development sites, of which 1.7 acres are currently unbuilt. This suggests that most of the physical change in Downtown will result from the intensification and improvement of existing structures. However, over the lifetime of the *Plan*, some new construction resulting from the consolidation of parcels or demolition of existing structures could also occur.

Table 1 is a matrix which shows the key development standards assumed for each of the four EIR Alternatives.

### Detailed Description of Four Alternatives

City of Berkeley staff have translated the *Plan's* regulations and incentives, as they would be applied to parcels having a high potential for eventual redevelopment<sup>4</sup>, into levels of physical development. Each alternative is described below in terms of the square footage of new development that could result, the number of parking spaces which would be required, the potential number of new residential units and any underlying assumptions as to market or consumer behavior which affect the outcome. The physical development allowable on these parcels is the focus of much of this environmental analysis.

Existing Conditions on Parcels with Potential for Development (Table 2). Twenty-four parcels in the Downtown study area have been selected as part of the Downtown planning process as possessing the characteristics that might lead to their eventual redevelopment. These parcels are listed in Table 2 by Block Number and Parcel Number. This table also generally locates the parcels by subarea and street or nearby intersection and provides the existing zoning of the parcel. In addition, the size of each parcel and the existing built space on each parcel are shown. Figure 4 shows the location of each parcel on the base map.

In Berkeley, floor area ratio (FAR) calculations<sup>5</sup> include space allocated for parking (including at-grade parking lots). In the tables which follow describing each Alternative, the far right column in each case presents total development allowable on each parcel, including space for the required number of parking spaces.

No Action Alternative (Table 3). Under this continuation of existing development regulations, the study area could build out 1.3 million square feet of new development and would require 2,688 parking spaces, all of which would be provided onsite with no consolidated lots. Combining the structural development and required parking would allow for a total level of new development of over 2.2 million square feet in the study area.

This alternative represents the level of growth that would probably occur on the 24 selected potentially developable parcels under existing policies and regulations governing development and based on densities consistent with current projects.

---

<sup>4</sup> Sites designated as having the potential for additional development were selected by staff on the basis of their parcel size (a minimum of 10,000 square feet) and their existing floor area ratio (a maximum of 1.0).

<sup>5</sup> Floor area ratio (FAR) is a measure of development on a given site divided by the lot area (e.g. 40,000 square feet of development on a 20,000 square foot lot would reflect an FAR of 2.0). In Berkeley, all structural space above grade is included in the numerator of this equation, whereas subsurface space (generally in the form of parking) is not. Throughout this report the denominator (1.0) has been suppressed and the FAR simply expressed as a single numerator (e.g., 3.5 : 1.0 is shown as 3.5).



Table 1

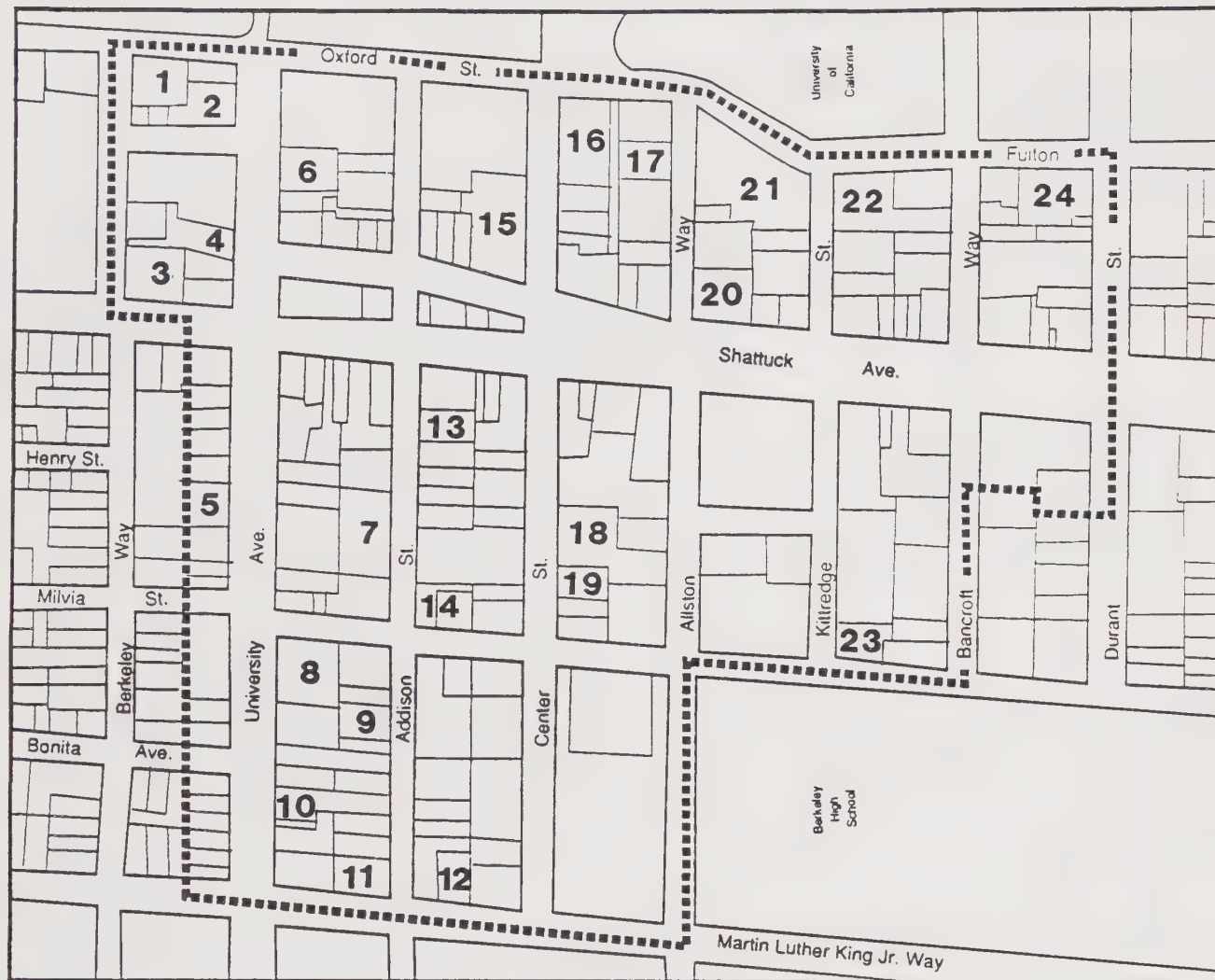
Development Standards and Assumptions:  
EIR Alternatives

	<u>No Action Alternative</u>	<u>Downtown Plan - Base Alternative</u>	<u>Downtown Plan - Maximum Bonus Alternative</u>	<u>Low Intensity Development Alternative</u>
Uses Permitted	As permitted under existing C-2 Zoning and Amended C-2 Regulations for specific blocks.	Ground floor throughout Downtown limited to commercial, cultural or retail services. Retail required along ground floor/street frontage of Shattuck Avenue.	Same uses as under the Base Alternative	All uses permitted on all floors in Core Subarea. Top two floors limited to residential uses in other subareas.
Floor Area Ratio	6.0:1 (C-2 Zone) 3.0:1 (C-1 Zone)	4.0:1 (Core subarea)  3.5:1 (Oxford subarea)  3.0:1 (Other subareas)	6.0:1 (Core subarea for projects with > 100,000 s.f. of retail)  4.5:1 (Oxford subarea for projects with 75% or more residential land use)  4.0:1 (Other subareas for projects with 75% or more residential land use)	3.0:1 (all Downtown subareas)
Maximum Height	100' / 9 st (C-2 Zone) 50' / 4 st (C-1 Zone)	65' / 5 st (Core subarea) 50' / 4 st (Oxford edge) 40' / 3 st (Other subareas)	87' / 7 st (Core subarea) 75' / 5 st (Oxford edge) 60' / 4 st (Other subareas)	40' / 3 st (all Downtown subareas)
Parking Standards				
Commercial Uses	2 spaces per 1,000 s.f.	1.5 spaces per 1,000 s.f.	Same as under the Base Alternative w/ the following exception:	2 spaces per 1,000 s.f.
Residential Uses	1 space per unit or 1 space per 1,000 g.s.f.	1 space per unit, or 1 space per three units (Core subarea), or 1 space per two units (along Shattuck Avenue and University Avenue)  No onsite Parking in Core subarea; instead, in-lieu fees, or offsite location in other subareas.  Assumes City-built parking structure on the Berkeley Way and Oxford Way lots.	No parking required for retail in bonus projects	1 space per unit  All parking provided onsite, with 50% below grade.  Assumes City-built parking structure on the Berkeley Way and Oxford Way lots.

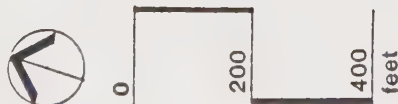
Note: st = story/stories  
s.f. = square feet  
g.s.f. = gross square feet

Detailed descriptions of the specific criteria to be considered when proposals for changes in use come before the city are provided in the Plan on pp. 113-116 and are summarized below on pp. 43-62 of this EIR in the Land Use and Planning section of Chapter IV.

Solar access, yard and setback requirements, and lot coverage standards are described in the Plan on p. 116 and below on pp. 79-126 of this EIR in the Urban Design and Visual Quality section of Chapter IV.



**Figure 4**  
**Location of Parcels with**  
**Additional Development Potential**



Downtown Plan - Base Alternative (Table 4). The maximum total new development (including project parking) allowable in the entire study area under the *Downtown Plan* without the application of any bonus square footage would be 1,460,800 square feet. Approximately 649 additional parking spaces would have to be provided; in-lieu payments could be made for 1,040 more spaces. Approximately 268 housing units are assumed.

Parking would be required at 1.5 spaces per 1,000 square feet of commercial development, but (for those parcels located within the core subarea) would have to be provided outside of the core area. In other subareas, parking could be located onsite, but the option of paying in-lieu fees would be available. This Alternative also assumes that the City will build a 300+ space garage on the existing Oxford Street parking lot and that 200+ spaces would be provided in peripheral lots.

Downtown Plan - Maximum Bonus Alternative (Table 5). The *Berkeley Downtown Plan* allows for development bonuses to be granted in two cases: 1) if a project outside of the core subarea were to be proposed with at least 75 percent of its gross space in residential uses, the FAR could increase by 1.0 and the height could increase to a maximum of 75 feet (six stories) in the Oxford Edge and 60 feet (five stories) in the other buffer areas; and 2) if a project in the core subarea were proposed to include a minimum of 100,000 square feet of retail space, a bonus FAR of 2.0, up to a maximum height of 87 feet (seven stories).

Assuming that all bonuses available to each parcel were deployed, the total new built development allowable would be over 1.7 million square feet; total development including parking would reach just over 2.0 million square feet. Over 850 parking spaces would be required and in-lieu payments for 647 spaces would also be required.

Because this bonus-based Alternative assumes an emphasis on residential land uses in order to capture the bonus development, the resulting 934 housing units are also shown.

Low Intensity Development Alternative (Table 6). In the event that the existing requirement of two parking spaces for every 1,000 gross square feet of development were retained and no special exemptions were granted for parking provision, this low intensity alternative would allow for nearly 1.0 million square feet of space. About 1,595 parking spaces would be required in the Downtown study area. Nearly 700 housing units would be allowed.

The environmental impact analyses described in Chapter IV address both the *Plan's* proposed programs and new development allowed under each of these four alternatives. As noted above Tables 3, 4, 5 and 6 present data for each of the four EIR Alternatives.

#### Breadth of Alternatives Chosen

The four alternatives described and analyzed in this program EIR were chosen by City of Berkeley staff. Based on the familiarity of staff with key issues affecting the Downtown and in consultation with the EIR consultant, the detailed projections of developable square footage and required parking spaces were prepared. The breadth of the alternatives' features is intended to satisfy several criteria suggested in the Guidelines for implementation of the California Environmental Quality Act (CEQA).



First, where professional judgments were required, or where assumptions had to be made, the alternatives were specified in a conservative manner (i.e. one which would insure that potential adverse environmental impacts would not be underestimated). For instance, in calculating the amount of future development allowable in the study area, the analysis assumes relatively efficient spatial layouts of buildings and parking garages; should architects not design actual projects at as high a level of efficiency as these alternatives assume, the impacts (e.g. square footage of project, vehicular trips generated, demand for public services) would be less than forecast in this report.

Second, no alternatives were analyzed which were believed to be fundamentally infeasible from a policy perspective. Elected and appointed decisionmakers in Berkeley have established a series of basic criteria which must underlie any downtown plan to be adopted and implemented. Therefore, any alternative composed of elements known by staff or the consultant to be contrary to unequivocal policy directions of the City have not been included.

Third, the spread in the level of development and mix of land uses represented by the difference between the Low Intensity Development Alternative and the Downtown Plan - Maximum Bonus Alternative is thought to encompass all likely final plan development scenarios. In this way, adjustments to the policies and programs of the *Plan* can be undertaken by the Planning Commission and/or City Council without substantial additional environmental analysis being undertaken; the parameters of potential impacts will have been forecast in this report.

Fourth, because the *Plan*, by definition, addresses properties and activities within the study area boundaries, no offsite alternatives have been identified. As a way of providing guidance to landowners and developers of properties adjacent to the Downtown or located along some of the major circulation corridors entering the Downtown, the *Plan* itself provides some discussion of these areas and the City's vision for any new construction and changes in use in those areas. This EIR does not consider the impacts of the City's visions for these properties, which lie outside of the study area.

Table 2

Existing Conditions on Underutilized Parcels  
in the Study Area

	<u>Block and Parcel #</u>	<u>Location</u>	<u>Subarea<sup>a</sup></u>	<u>Zoning</u>	<u>Parcel Size (square feet)</u>	<u>Built Space (square feet)</u>
1.	2045-2	Oxford	2	C-1	15,276	12,831
2.	2045-4	University	2 (SU)	C-1	12,420	5,175
3.	2046-1	Shattuck	3 (SU)	C-1	17,597	17,247
4.	2046-9	University	3 (SU)	C-1	11,857	10,077
5.	2053-8	University	3 (SU)	C-1	12,388	9,792
6.	2034-12	University	3 (SU)	C-2	13,821	11,447
7.	2025-9	Addison	1 (C)	C-2	25,847	25,531
8.	2024-1	University	3 (SU)	C-2 <sup>b</sup>	22,950	10,177
9.	2024-5	Addison	3	C-2'	10,836	7,790
10.	2024-10-2	Univ./Addison	3 (SU)	C-2'	18,210	9,624
11.	2024-13	MLK	3	C-2'	12,411	4,250
12.	2022-9	MLK	3	C-2'	10,200	6,280
13.	2023-25	Addison	1	C-2	10,294	10,125
14.	2023-16 & 17	Milvia/Addison	1	C-2	14,136	9,938
15.	2032-5-3	Shattuck/Center	1 (C)	C-2	37,838	14,765
16.	2031-1 & 2	Center	2	C-2	35,955	27,193
17.	2031-3	2161 Allston	2	C-2	11,895	0
18.	2026-11	Allston/Center	1 (C)	C-2	30,480	0
19.	2026-10	Allston/Center	1	C-2	9,750	9,750
20.	2030-1	Allston	1	C-2	26,018	26,140
21.	2030-3-4...7	Pkng. Lot (City)	1	C-2	34,200	0
22.	2029-2-4	Oxford/Kittredge	2	C-2	26,000	4,676
23.	2028-13	Kittredge/Milvia	3	C-2	11,374	2,488
24.	1893-2...5	Fulton/Durant	3	C-2	20,908	0

Note: Subareas are numbered as follows: Core = 1; Oxford Edge = 2; and Other Buffers = 3.

Please see page 38 for additional footnotes to this table.

Table 3

## Detailed Description of No Action Alternative

	<u>Block and Parcel #</u>	<u>Location</u>	<u>Buildout Structural Development (square feet)</u>	<u>Housing Units Included</u>	<u>Parking Spaces<sup>c</sup></u>	<u>Total Development<sup>d</sup> (square feet)</u>
1.	2045-2	Oxford	26,900	0	54	45,800
2.	2045-4	University	21,900	0	44	37,300
3.	2046-1	Shattuck	31,100	0	62	52,800
4.	2046-9	University	20,900	0	42	35,600
5.	2053-8	University	21,800	0	44	37,200
6.	2034-12	University	48,600	0	98	82,900
7.	2025-9	Addison	91,400	0	182	155,100
8.	2024-1	University	40,500	0	81	68,900
9.	2024-5	Addison	19,200	0	38	32,500
10.	2024-10-2	Univ./Addison	32,200	0	64	54,600
11.	2024-13	MLK	21,800	0	44	37,200
12.	2022-9	MLK	18,000	0	36	30,600
13.	2023-25	Addison	36,200	0	73	61,800
14.	2023-16 & 17	Milvia/Addison	49,800	0	100	84,800
15.	2032-5-3	Shattuck/Center	133,600	0	267	227,000
16.	2031-1 & 2	Center	126,800	0	254	215,700
17.	2031-3	2161 Allston	42,200	0	85	71,900
18.	2026-11	Allston/Center	107,600	0	215	182,900
19.	2026-10	Allston/Center	34,400	0	69	58,500
20.	2030-1	Allston	91,700	0	184	156,100
21.	2030-3-4...7	Pkng. Lot (City)	120,900	0	241	205,200
22.	2029-2-4	Oxford/Kittredge	92,000	0	183	156,000
23.	2028-13	Kittredge/Milvia	40,200	0	80	68,200
24.	1893-2...5	Fulton/Durant	73,600	0	148	125,400
Study Area Total			1,343,300	0	2,688	2,251,000

Please see page 38 for additional footnotes to this table.



Table 4

## Detailed Description of Downtown Plan - Base Alternative

	<u>Block and Parcel #</u>	<u>Location</u>	<u>Subarea<sup>a</sup></u>	<u>Buildout Structural Development (square feet)</u>	<u>Housing Units Included<sup>e</sup></u>	<u>Parking Spaces<sup>c</sup></u>	<u>Total Development<sup>d</sup> (square feet)</u>
1.	2045-2	Oxford	2	35,300	0	53	53,500
2.	2045-4	University	2 (SU)	28,400	0	52	43,500
3.	2046-1	Shattuck	3 (SU)	36,000	38	48	52,800
4.	2046-9	University	3 (SU)	26,500	25	26	35,600
5.	2053-8	University	3 (SU)	28,100	26	26	37,200
6.	2034-12	University	3 (SU)	31,300	30	29	41,500
7.	2025-9	Addison	1 (C)	103,400	155	(155) L <sup>f</sup>	103,400
8.	2024-1	University	3 (SU)	52,400	49	47	68,900
9.	2024-5	Addison	3	21,700	14	31	32,500
10.	2024-10-2	Univ./Addison	3 (SU)	37,800	14	48	54,600
11.	2024-13	MLK	3	24,600	16	36	37,200
12.	2022-9	MLK	3	20,100	13	30	30,600
13.	2023-25	Addison	1	41,200	0	(62) L	41,200
14.	2023-16 & 17	Milvia/Addison	1	56,500	0	(85) L	56,500
15.	2032-5-3	Shattuck/Center	1 (C)	151,400	0	(227) L	151,400
16.	2031-1 & 2	Center	2	82,400	0	124	125,800
17.	2031-3	Allston	2	27,600	0	41	41,900
18.	2026-11	Allston/Center	1 (C)	121,900	0	(182) L	121,900
19.	2026-10	Allston/Center	1	39,000	0	(58) L	39,000
20.	2030-1	Allston	1	104,100	0	(156) L	104,100
21.	2030-3-4...7	Pkng. Lot (City)	1				
22.	2029-2-4	Oxford/Kittredge	2	59,500	0	90	91,000
23.	2028-13	Kittredge/Milvia	3	22,600	15	33	34,100
24.	1893-2...5	Fulton/Durant	3	41,700	28	60	62,700
Study Area Total				1,193,400	268	649 (+ 1,040 in-lieu)	1,460,800

Please see page 38 for additional footnotes to this table.

Table 5

## Detailed Description of Downtown Plan - Maximum Bonus Alternative

	<u>Block and Parcel #</u>	<u>Location</u>	<u>Subarea<sup>a</sup></u>	<u>Buildout Structural Development (square feet)</u>	<u>Housing Units Included<sup>e</sup></u>	<u>Parking Spaces<sup>c</sup></u>	<u>Total Development<sup>d</sup> (square feet)</u>
1.	2045-2	Oxford	2	46,300	47	64	68,700
2.	2045-4	University	2 (SU)	43,300	45	36	55,900
3.	2046-1	Shattuck	3 (SU)	48,000	57	64	70,400
4.	2046-9	University	3 (SU)	36,600	38	31	47,400
5.	2053-8	University	3 (SU)	38,400	40	32	49,600
6.	2034-12	University	3 (SU)	42,700	45	36	55,300
7.	2025-9	Addison	1 (C)	155,100	0	(83) L <sup>f</sup>	155,100
8.	2024-1	University	3 (SU)	70,800	74	60	91,800
9.	2024-5	Addison	3	29,300	30	40	43,300
10.	2024-10-2	Univ./Addison	3 (SU)	56,000	59	48	72,800
11.	2024-13	MLK	3	33,500	34	46	49,600
12.	2022-9	MLK	3	27,500	28	38	40,800
13.	2023-25	Addison	1	61,800 <sup>g</sup>	61	(43) L	61,800
14.	2023-16 & 17	Milvia/Addison	1	84,800 <sup>g</sup>	84	(60) L	84,800
15.	2032-5-3	Shattuck/Center	1 (C)	227,000	0	(190) L	227,000
16.	2031-1 & 2	Center	2	126,100	110	102	161,800
17.	2031-3	Allston	2	36,800	36	49	53,900
18.	2026-11	Allston/Center	1 (C)	182,900	0	(124) L	182,900
19.	2026-10	Allston/Center	1	58,500 <sup>g</sup>	58	(41) L	58,500
20.	2030-1	Allston	1	156,100	0	(84) L	156,100
21.	2030-3-4...7	Pkng. Lot (City)	1				
22.	2029-2-4	Oxford/Kittredge	2	77,100	0	114	117,000
23.	2028-13	Kittredge/Milvia	3	30,800	31	42	45,500
24.	1893-2...5	Fulton/Durant	3	56,300	57	78	83,600
Study Area Total				1,725,700	934	858 (+ 647 in-lieu)	2,033,700

Please see page 38 for additional footnotes to this table.

Table 6

## Detailed Description of Low Intensity Development Alternative

	<u>Block and Parcel #</u>	<u>Location</u>	<u>Subarea<sup>a</sup></u>	<u>Buildout Structural Development (square feet)</u>	<u>Housing Units Included<sup>e</sup></u>	<u>Parking Spaces<sup>c</sup></u>	<u>Upper 2 Floors Resi-dential<sup>h</sup></u>	<u>Total Development<sup>d</sup> (square feet)</u>
1.	2045-2	Oxford	2	36,700	40	26	Yes	45,800
2.	2045-4	University	2 (SU)	29,900	33	21	Yes	37,300
3.	2046-1	Shattuck	3 (SU)	42,300	46	30	Yes	52,800
4.	2046-9	University	3 (SU)	28,600	31	20	Yes	35,600
5.	2053-8	University	3 (SU)	29,800	33	21	Yes	37,200
6.	2034-12	University	3 (SU)	33,100	36	24	Yes	41,500
7.	2025-9	Addison	1 (C)	57,600	0	57	No	77,500
8.	2024-1	University	3 (SU)	55,200	61	39	Yes	68,900
9.	2024-5	Addison	3	26,200	28	18	Yes	32,500
10.	2024-10-2	Univ./Addison	3 (SU)	43,800	48	31	Yes	54,600
11.	2024-13	MLK	3	29,900	33	21	Yes	37,200
12.	2022-9	MLK	3	24,300	27	18	Yes	30,600
13.	2023-25	Addison	1	22,800	0	23	No	30,900
14.	2023-16 & 17	Milvia/Addison	1	31,600	0	31	No	42,400
15.	2032-5-3	Shattuck/Center	1 (C)	84,100	0	84	No	113,500
16.	2031-1 & 2	Center	2	86,200	95	61	Yes	107,900
17.	2031-3	Allston	2	29,000	31	20	Yes	36,000
18.	2026-11	Allston/Center	1 (C)	67,600	0	68	No	91,400
19.	2026-10	Allston/Center	1	21,600	0	22	No	29,300
20.	2030-1	Allston	1	57,800	0	58	No	78,100
21.	2030-3-4...7	Pkng. Lot (City)	1					
22.	2029-2-4	Oxford/Kittredge	2	62,300	69	45	Yes	78,000
23.	2028-13	Kittredge/Milvia	3	27,500	30	19	Yes	34,100
24.	1893-2...5	Fulton/Durant	3	50,100	55	36	Yes	62,700
Study Area Total				977,800	696	1,595 (794 below grade)		1,255,700

Please see page 38 for additional footnotes to this table.



Footnotes to Tables 2, 3, 4, 5 and 6

- <sup>a</sup> Subarea notes (SU) and (C) designate parcels along Shattuck Avenue and University Avenue (SU) and in the Core subarea (C) which are subject to specific standards.
- <sup>b</sup> Zoning of C-2' applies to parcels in the "transition" C-2 Zone where zoning regulations were amended in 1986 (see Figure 7).
- <sup>c</sup> All projections assume parking spaces of 350 square feet.
- <sup>d</sup> Total development includes all above-grade structural development and parking spaces.
- <sup>e</sup> All projections assume housing units of 750 square feet.
- <sup>f</sup> "L" indicates that parking in-lieu fee would be paid. Parking not provide onsite.
- <sup>g</sup> Bonus in core can be residential when project would be too small for retail bonus. Parking required at one space per three units.
- <sup>h</sup> The Low Intensity Alternative requires the top two floors to be residential uses in the buffer (non-core) subareas. No such restriction applies in the core subarea.

Note: Tables 3-6 show total gross development allowable under each alternative. The impact analysis in Chapter IV takes account of the existing level of development (Table 2) prior to forecasting environmental impacts of the net growth.

## Community Involvement and Preparation of the Plan

The process that has produced the *Plan* began in September 1984, when the Planning Commission selected the organizations which were invited to send representatives to a new advisory committee, the Downtown Plan Committee (DPC). This group of volunteers was established to guide the preparation of the *Berkeley Downtown Plan* and serve as a link between city staff and the full Planning Commission. (See Appendix B for a list of the Committee members and the organizations they represent.)

Staff and members of the DPC collected and reviewed data and other information on the major conditions and trends affecting Downtown Berkeley for several months and then summarized these materials into the *Phase 1 Report*. A community forum was held in April 1985 to solicit public comments on the future of Downtown. These comments were incorporated into a series of draft goals and policies. The goals and policies were discussed by the full DPC and in sub-committee meetings and, where consensus among the participants was clear, were eventually synthesized into what became known as the "*Common Framework*". This document received a very positive response from those participating in the second community forum in March 1986.

The Planning Commission adopted a *Goals and Policies Statement* in June of 1986.

Staff and the DPC then prepared three development scenarios. Because traffic circulation constraints represent such a potentially critical factor in Downtown growth, these development scenarios were modeled and analyzed for their impacts on Downtown intersections by an independent transportation consultant. Two reports resulted from this transportation analysis. In August 1986, the *Assessment of Existing Conditions and Strategies* was published. It was followed in November of that same year by the *Assessment of Land Use Scenarios and Strategies*. Staff also outlined the likely impacts of the three scenarios in terms of other environmental topics. Out of that analysis, a "revised scenario" was fashioned and was set forth as the DPC's recommended framework for the *Berkeley Downtown Plan* document. All of these analyses were published in September 1986 in the *Phase 2 Report*, which was the subject of a third community forum held in the same month.

The next document published was the *Berkeley Downtown Plan - Working Document* in September 1987. That plan document was reviewed by several Berkeley commissions and was the subject of a public hearing on October 1987. Several weeks of discussion before the Planning Commission lead to a series of choices by the Commission which refined the plan to include specific height limits and priorities for land uses which had, in prior documents, remained open to debate.

The *Working Document* was subsequently revised to reflect the Planning Commission votes and the Draft *Berkeley Downtown Plan* was published in February 1988.

## Review and Adoption of the Downtown Plan

The final steps in the process of adopting the *Downtown Plan* include the environmental review of the draft plan, certification of the final EIR and refinement of the *Downtown Plan* in response to findings in the EIR and recommendations of the City's Planning Commission and Council.

Implementation of the *Plan's* standards and incentives could be accomplished by either of two routes: (1) Specific Plan and Amendment to City's General Plan; or (2) Area Plan with all of the individual standards and regulations incorporated into ordinances (e.g. Zoning, Design Review and Landmarks Preservation).

## HOW TO CROSS-REFERENCE THE DOWNTOWN PLAN AND THIS EIR

Elements of the *Downtown Plan* address seven major substantive topics (as listed in Chapter I above). Each of these seven elements includes objectives, policies and programs that may interact with one or more topical areas examined in Chapter IV of this EIR. For instance, the Historic Preservation and Urban Design Element of the plan may affect both the EIR sub-chapter on Urban Design and Visual Impacts, and the sub-chapter on Land Use and Planning.

The correspondence between Elements of the *Downtown Plan* and topics analyzed in the EIR is shown in Table 7. The order of magnitude of the relationship between the Plan's information and the EIR's is further distinguished through the use of italics to indicate a less extensive analytical link and regular type to show a stronger, more explicit linkage.

At some level of detail, it would be possible to show connections between other *Plan* topics and EIR impacts than those outlined here. However, this EIR seeks to optimize the two goals of clarity and comprehensiveness by focusing on key relationships that are more likely to result in significant impacts.



Table 7

Locations of Corresponding Information in the  
Berkeley Downtown Plan and Environmental Impact Report

<u>Downtown Plan Element</u>	<u>Pages</u>	<u>EIR Subchapter of Chapter IV</u>	<u>Pages</u>
Historic Preservation and Urban Design	7-28	Urban Design and Visual Quality <i>Land Use and Planning</i> <i>Fiscal</i>	79-126 43-62 213-226
Social/Cultural	29-35	Socioeconomics <i>Land Use and Planning</i> <i>Fiscal</i>	63-78 43-62 213-226
Environmental Quality, Open Space and Recreation			
Air and Water Quality	37-38	Air Quality Hydrology and Water Quality <i>Fiscal</i>	165-171 198-203 213-226
Energy	39-41	Public Facilities and Services	204-212
Fire	41-42	Public Facilities and Services <i>Fiscal</i>	204-212 213-226
Hazardous Waste, Toxic Materials and Other Hazards	42-44	Hazardous Waste/Toxics	179-188
Open Space and Recreation	44-48	Urban Design and Visual Quality <i>Public Facilities and Services</i> <i>Fiscal</i>	79-126 204-212 213-226
Seismic Safety	49-51	Geology, Soils and Seismicity	189-197
Economic	52-63	Socioeconomics <i>Fiscal</i>	63-78 213-226
Circulation and Transportation	64-89	Transportation Air Quality Noise <i>Urban Design and Visual Quality</i> <i>Fiscal</i>	127-164 165-171 171-178 79-126 213-226
University of California	90-94	Land Use and Planning Socioeconomics Public Facilities <i>Fiscal</i>	43-62 63-78 204-212 213-226
Land Use	95-118	All Subchapters	43-226

Source: Mundie & Associates



## CHAPTER IV

### ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

This chapter represents the heart of the environmental analysis of the *Berkeley Downtown Plan*. Included are sections addressing eleven separate groups of issues beginning with issues involving *Land Use and Planning*. Within each section, a consistent format is used, with the primary headings following a six-level outline:

- 1) introduction;
- 2) existing setting;
- 3) policies and programs which hold the potential to affect that topical issue;
- 4) impacts due to the new development allowable by the *Plan*;
- 5) public improvements or mitigation measures that take the form of programs in the *Downtown Plan*; and
- 6) remaining impacts and mitigation measures recommended by this EIR.

At the end of each topical section, under the heading of Remaining Impacts and Mitigation Measures Recommended by this EIR, impacts are reiterated and categorized according to their level of significance. Mitigation measures are recommended for each of the summarized effects even though some are categorized as "Not Significant" (symbolized by Ø) and therefore do not technically require mitigation. Other categories include "Subject to Mitigation" (symbolized by ⊙) and "Unavoidable Adverse Impact" (symbolized by ⊗).

#### LAND USE AND PLANNING

##### Introduction

The *Berkeley Downtown Plan* document sets forth six of its seven elements prior to the Land Use element. In this way, the Downtown Plan Committee, the Planning Commission and the community have suggested the relative importance of *Plan* components relating to historic preservation, social and cultural characteristics of the downtown, and issues of environmental quality. For different reasons - such as the logical unfolding of environmental impacts which are grounded on land use and planning characteristics of the plan - this EIR begins with land use and planning. In this way, the stage is then set for subsequent EIR sections.

##### Existing Setting

Land Use Composition. The land use composition of the twenty-block *Downtown Plan* Study Area was examined by City staff in 1984 and the data compared with recorded data from 1968 allowing trends to be discerned. The 1984 survey identified a total of 3,826,946 square feet of space (built space and vacant parcels) within the study area.

Allocating the more than 3.8 million square feet of space into five land use categories, the Downtown is composed of the following uses:

- 35 percent = offices
- 26 percent = commercial businesses
- 17 percent = auto-related uses
- 11 percent = residential use
- 11 percent = institutional uses



Offices. Privately-owned office space occupies about 892,000 square feet or 23 percent of the total Downtown space; over half of this total (492,292 square feet) represents growth in non-institutional office space occupied since the 1968 survey, the greatest volume change in land use in the Downtown over the past twenty years. Some of the increase in space occupied by private offices results from changes in use and the rest results from new construction: approximately 18 percent of the total office space (or 33 percent of the 1968 to 1988 growth in office space) has been constructed in the twenty years since 1968.

Institutional office space (e.g. University and City offices) accounts for about 454,000 square feet, or 12 percent of the Downtown total.

Commercial Businesses. Retail, service and financial establishments as well as entertainment uses make up the total of nearly 1,008,000 square feet in this category, with retail space of over 535,000 square feet predominating. This category has grown by about 217,000 square feet over the last twenty years.

Auto-related Uses. Uses in this category account for roughly 633,000 square feet in total, 12 percent of which represents parcels that have parking as a predominant use. Between 1968 and 1984, the parking area did not change appreciably, but the square footage allotted to auto related services and supplies declined noticeably from 142,200 square feet to about 90,000 square feet. Since 1984, development proposals have been received for two parcels (totaling 60,000 square feet) currently used for parking.

Residential Use. Over 700 year-round housing units are found in the study area, adding up to 435,000 square feet of residential space (including residential hotel rooms). A decrease in units of about 13 percent has occurred since 1968. Nearly all of the downtown's residential units are renter-occupied.

The typical structural layout involves hotel units or apartments over ground floor commercial or retail space. As noted in the Historic Preservation and Urban Design section of the *Plan*, this physical form of downtown, in which built space was designed to maximize street frontage, was at least partially formed due to the location of the Key System railroad route; buildings are contiguous to one another, service access to the buildings is from the interior or rear, and few buildings have vehicle parking spaces or usable open space.

Institutional Uses. A variety of governmental and public utility agencies occupy space (including the office space noted above) in Downtown Berkeley. This concentration of institutional uses makes the area a center of such uses from a regional point of view. With two exceptions - the relocation of the East Bay Municipal Utilities District's office on Bancroft Way and the decision on the part of the University of California to move its Office of the President (see p. 421) from University Hall on Oxford Street to the City of Oakland - no appreciable change has occurred in this land use category since 1968. As discussed elsewhere in this EIR, Alameda County is considering the possible expansion of the existing courthouse facility.

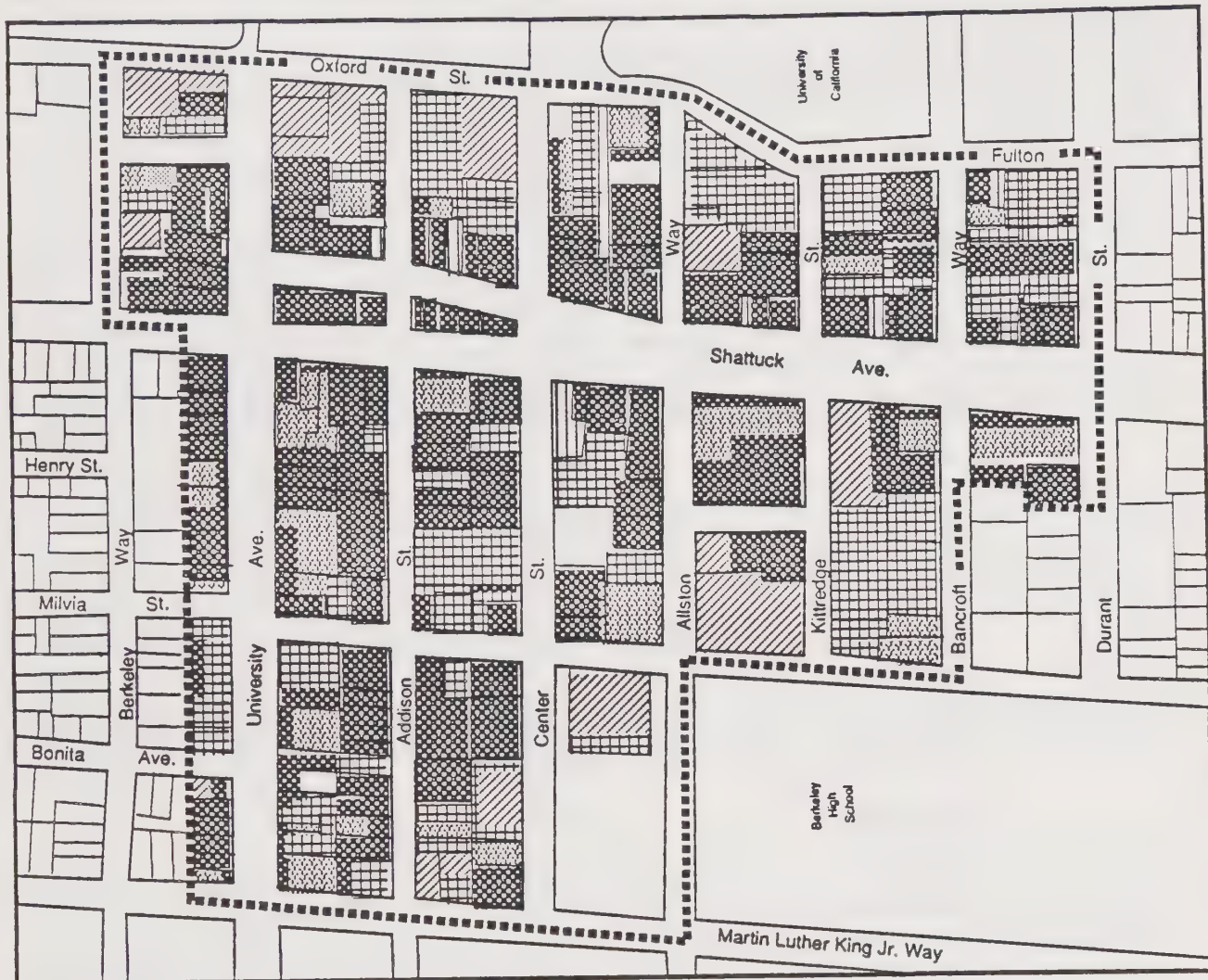
Table 8 summarizes Downtown space by these five land use categories and provides some further detail. Figure 5 shows the composite pattern of predominant land uses and Figure 6 shows land uses as they exist at the street front.






Table 8

Downtown Space Use by Land Use Category  
1984 Downtown Land Use Survey

<u>Category</u>	<u>Square Feet</u>	<u>% Of Total Built Space</u>
<u>Office</u>	1,346,086	35%
Private	892,009	23%
Public	454,007	12%
<u>Commercial</u>	1,007,954	26%
Retail	542,122	14%
Food	157,260	4%
Finance	143,006	4%
Service	83,731	2%
Entertainment	91,625	2%
<u>Residential</u>	435,182	11%
Houses	13,936	>1%
Hotels	157,678	4%
Apartments	263,568	7%
<u>Auto-Related</u>	633,207	17%
Parking	467,677	12%
Institutional	75,607	2%
Services	89,923	3%
<u>Institutional (Non-Office)</u>	404,517	11%
 Total	 3,826,946	 100%

Source: *Berkeley Downtown Plan*, Draft, February 1988, p. 99.



-  Public & Institutional (includes UC uses)
-  Commercial (includes Office & Retail)
-  Auto Related (includes parking)
-  Residential
-  Open Space & Vacant



**Figure 5**  
**Existing Downtown Land Use**



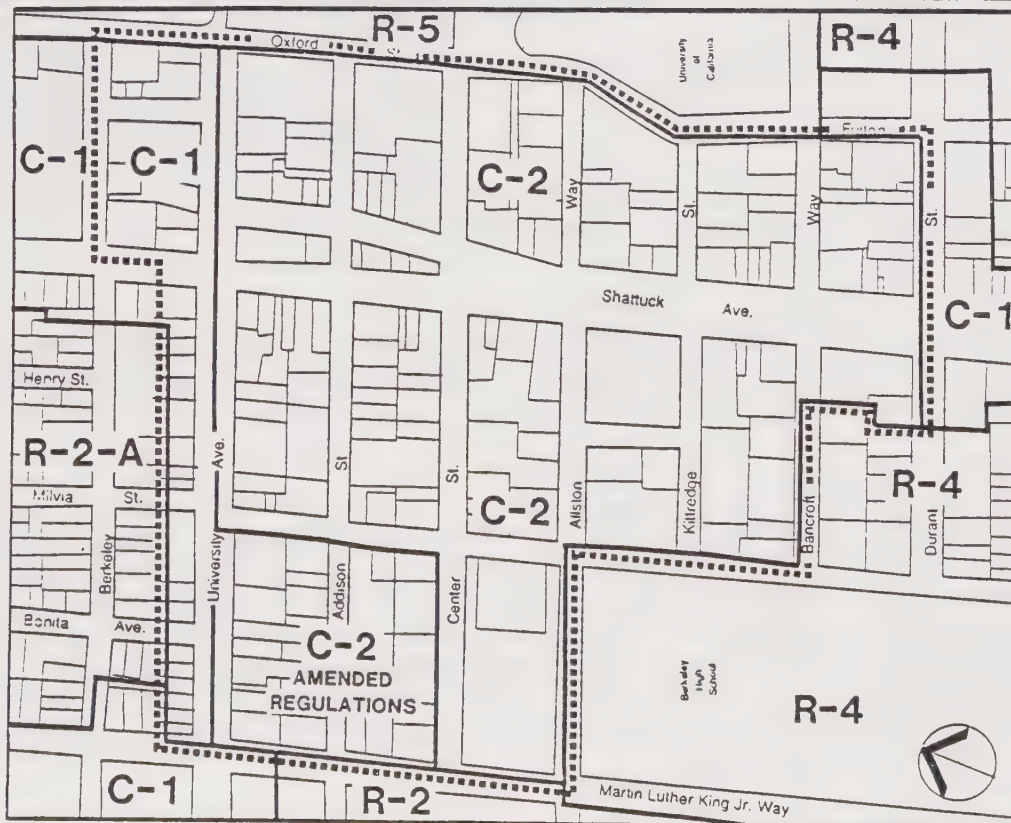
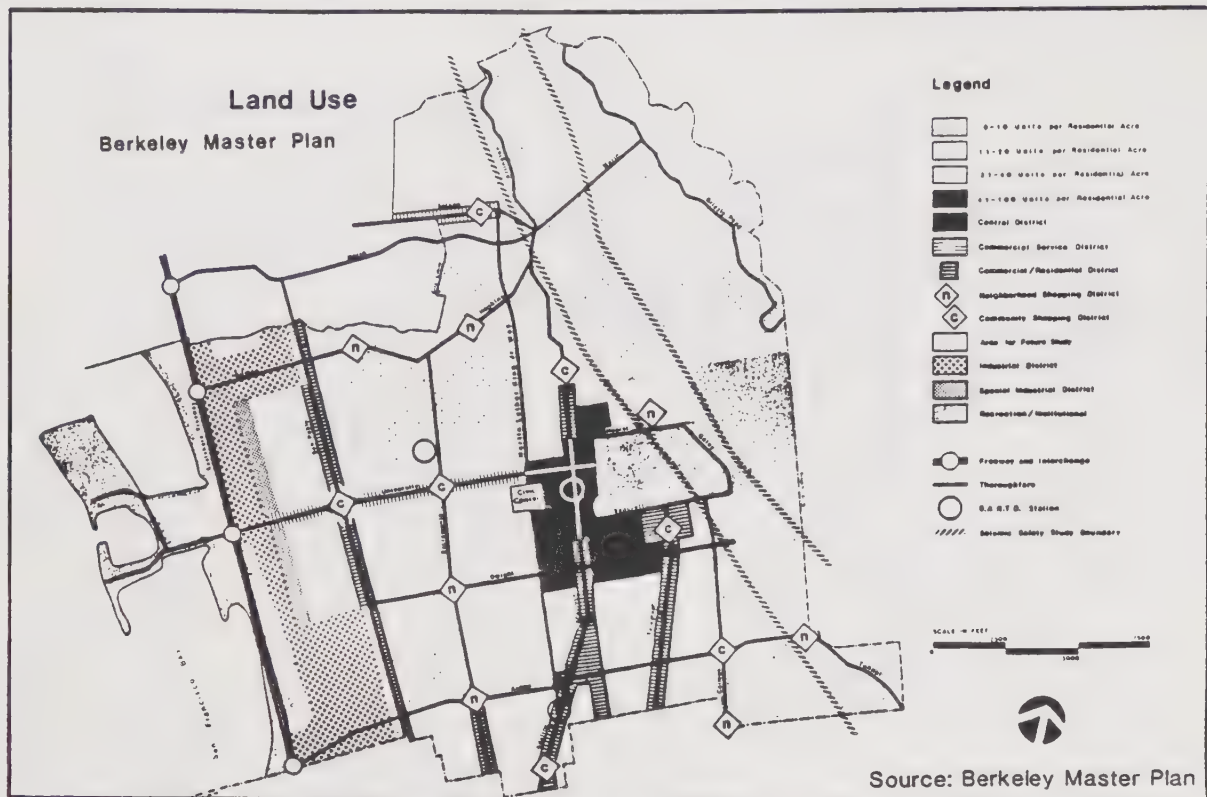


Figure 6  
**Street Frontage Land Use**

Zoning in the Downtown Study Area. The current zoning of parcels in the Downtown Study Area is shown in Figure 7. The figure shows a mixture of C-1, C-2 and C-2' designations. Adjacent to the study area are properties designated C-1, R-2, R-2A, R-4 and R-5 as shown in Figure 7.

Figure 7 includes the results of zoning reclassification actions in the periphery of the Downtown study area and to the south in 1985 and 1986. In 1985, nearly a dozen multiple-parcel areas were rezoned, generally in ways which reduced the development potential. For instance, several C-2 areas were reclassified C-1, R-2 or R-4. A small number of parcels were reclassified from a residential zone (R-2A or R-4) to a commercial zone (C-1 or C-2). In 1986, two broad changes within the study area resulted in the reclassification of a strip of parcels fronting University Avenue on the north side from C-2 to C-1, and the imposition of amendments to the C-2 district regulations for two blocks south of Milvia Street, between University Avenue and Center Street.

Table 3 ("Detailed Description of No Action Alternative", p. 24) shows the approximate maximum levels of development that could be approved in the Downtown for the 24 parcels on which additional development is most likely to occur.



Note: The two blocks currently subject to Amended Regulations in the C-2 Zoning category are also referred to as a "transitional area" subject to temporary supplemental regulation until the *Downtown Plan* is adopted.

**Figure 7**  
**Current Master Plan and Zoning**



Master Plan. The Berkeley Master Plan (1977) includes a wide variety of goals and policies for development in the City. Of the approximately 220 policies set forth in the Master Plan, there appear to be no clear-cut inconsistencies with goals, objectives and policies in the *Berkeley Downtown Plan*. However, the Master Plan's policies are not always unambiguous in their intended effect and, like all planning documents, often require the balancing of alternative costs and benefits.

The *Downtown Plan* would further the two policies in the Master Plan that explicitly address Downtown development. Policy 1.20 (p. 16, Master Plan) establishes that the City should "Recognize the distinct functions of four types of commercial areas with appropriate land use controls for each type" and then follows with this description of the "central district" (generally the area within the *Downtown Plan* study area): "Diverse center of commerce, government and cultural activities for Berkeley."

Policy 1.21 states that the city should "Encourage commercial activities serving a regional market to locate in the Central District or a commercial service district, and discourage them in neighborhood and community commercial districts."

The City has recently begun a wholesale review of the Master Plan (now referred to as the General Plan). However, a draft is not expected until late 1990 or early 1991.

In addition, two other Area Plans - one for West Berkeley and the other for South Berkeley - are being developed at the present time. Neither has yet been adopted.

Other Regional and State Plans/Policies. Several other agencies have adopted plans and policies that are relevant to analysis of the *Berkeley Downtown Plan*. The following agencies' plans or policies are addressed subsequently in this EIR under the topic(s) noted:

<u>Agency</u>	<u>EIR Section of Chapter IV</u>
California Department of Transportation (CalTrans)	<i>Transportation</i>
Bay Area Rapid Transit (BART) District	<i>Transportation</i>
Alameda/Contra Costa (A/C) Transit District	<i>Transportation</i>
Bay Area Air Quality Management District	<i>Transportation and Air Quality</i>
Regional Water Quality Control Board (RWQCB)	<i>Hydrology and Water Quality and Hazardous Wastes/Toxics</i>
Association of Bay Area Governments (ABAG)	<i>Socioeconomics</i>
Alameda County	<i>Hazardous Wastes/Toxics</i>
California Department of Health Services (DOHS)	<i>Hazardous Wastes/Toxics and Noise</i>

As noted throughout this EIR, the University of California is in the process of updating its Long Range Development Plan (LRDP) for the Berkeley Campus. At the time that analysis was completed for this EIR, the draft LRDP was not yet available. (See Chapter V, and in particular, Table 29, for a preliminary list of UC projects and an evaluation of the cumulative effects of that development.)

Description of Downtown Subareas. As shown in Figure 3 and first mentioned above in Chapter III, the *Plan* addresses its regulations and incentives specifically to each of four subareas. The *Plan* document (see pages 99-106) provides a detailed description of each subarea, describing their existing characteristics and functions, and estimating the potential for new development as shown in Tables 3 through 6 in this EIR; what follows are paraphrased summaries of that more detailed text.



Central Core. The Central Core subarea is Berkeley's historic central business district and is also a focal point for transportation with the BART Station and numerous bus routes intersecting here (AC Transit, UC and LBL). The Downtown's main shopping arterial with the most desirable retail frontage, Shattuck Avenue, traverses the middle of this subarea from north to south.

The Central Core encompasses nearly 1,639,000 square feet of very diverse built space and approximately 1.7 acres of vacant land. The existing structures in the core range from one to twelve stories in height and up to floor area ratios (FAR) of 6.3 : 1 for the Wells Fargo Bank building and 8.3 : 1 for the Great Western Building.

Oxford Edge. This thin subarea along the study area's eastern edge is located directly across Oxford Street from the University of California campus; UC-owned and operated space predominates in this subarea. It is further characterized by scattered vacant or undeveloped parcels and parking lots. Fully 53 percent of its total space is devoted to auto-related land uses and only 6 percent commercial, the lowest percentage of commercial uses in a Downtown subarea. There are three historic landmark structures and two residential buildings along Oxford Street.

West Edge/Civic Center. This subarea contains only four potential development sites and the possibility of a little over 52,000 square feet of new construction, but the *Plan* envisions the possibility of other compatible institutional and cultural uses in the existing buildings. A majority of the land uses in the subarea are institutional: included are the Civic Center Building and park, Old City Hall (now Berkeley U.S.D. offices), the Alameda County Courthouse, Berkeley Community Theatre, Berkeley High School and Veterans' Building.

South Shattuck. Land uses in this subarea are predominantly institutional followed by a roughly equal distribution of other uses. The replacement of the subarea's existing auto-related uses is one concept which is emphasized in the *Plan*. About five acres of potential developable sites exist along the South Shattuck Avenue corridor.

North Edge. This subarea embraces both sides of University Avenue from Martin Luther King Jr. Way to Walnut Avenue, extending north to Berkeley Way on its eastern end. It functions as the roadway entrance to the Downtown, and it buffers the neighborhoods to the north from the other Central Core activities. Thirty of the forty-seven properties fronting along University Avenue in this subarea are listed on either the national or city list of historic and landmark structures.

There are no vacant parcels along University Avenue; those eight parcels included in the EIR Alternatives development calculations (see Table 2) were chosen by staff because the structures onsite are not substantial and were thought to hold the potential for eventual redevelopment under the *Plan's* regulations. Any new construction would have to displace existing development in this subarea.

In 1986, the City reclassified the north side of University Avenue to C-1 zoning.

### **Policies and Programs Significantly Affecting Land Use or Local Planning**

The *Berkeley Downtown Plan* document proposes seven policies or programs which hold the potential to result in environmental impacts of a magnitude that could be significant from the viewpoint of the California Environmental Quality Act. Each is discussed below in the order in which they appear in the *Plan* itself.

The analysis in this and the following subsection (pp. 39 to 49) address the potential adverse effects of policies and programs; the beneficial or mitigating aspects of the *Plan* on land use or planning issues are considered below (pp. 49 to 50).

Downtown Conservation/Historic Zoning Overlay. The Historic Preservation and Urban Design Element of the *Plan* (p. 21) includes this recommended addition to the City's Zoning regulations for the area along Shattuck Avenue (most of which is located within the *Downtown Plan* Study Area) shown in Figure 8 below. It would constitute a new section of the Design Review Ordinance and would include new regulations to control the appearance of new construction and remodeling. It would involve the creation of an Historic Design Review Committee comprised of all members of the existing Design Review Committee and two members designated by the Landmarks Preservation Commission. The new Committee's review of applicable projects would substitute for review by the regular Design Review Committee.

This proposed change is addressed in the *Urban Design and Visual Impacts* section of this EIR from the standpoint of its potential effect on design and historic preservation. Here, the concern is over potential organizational or procedural impacts and whether the new overlay zone and review committee would conflict with other City of Berkeley policies.

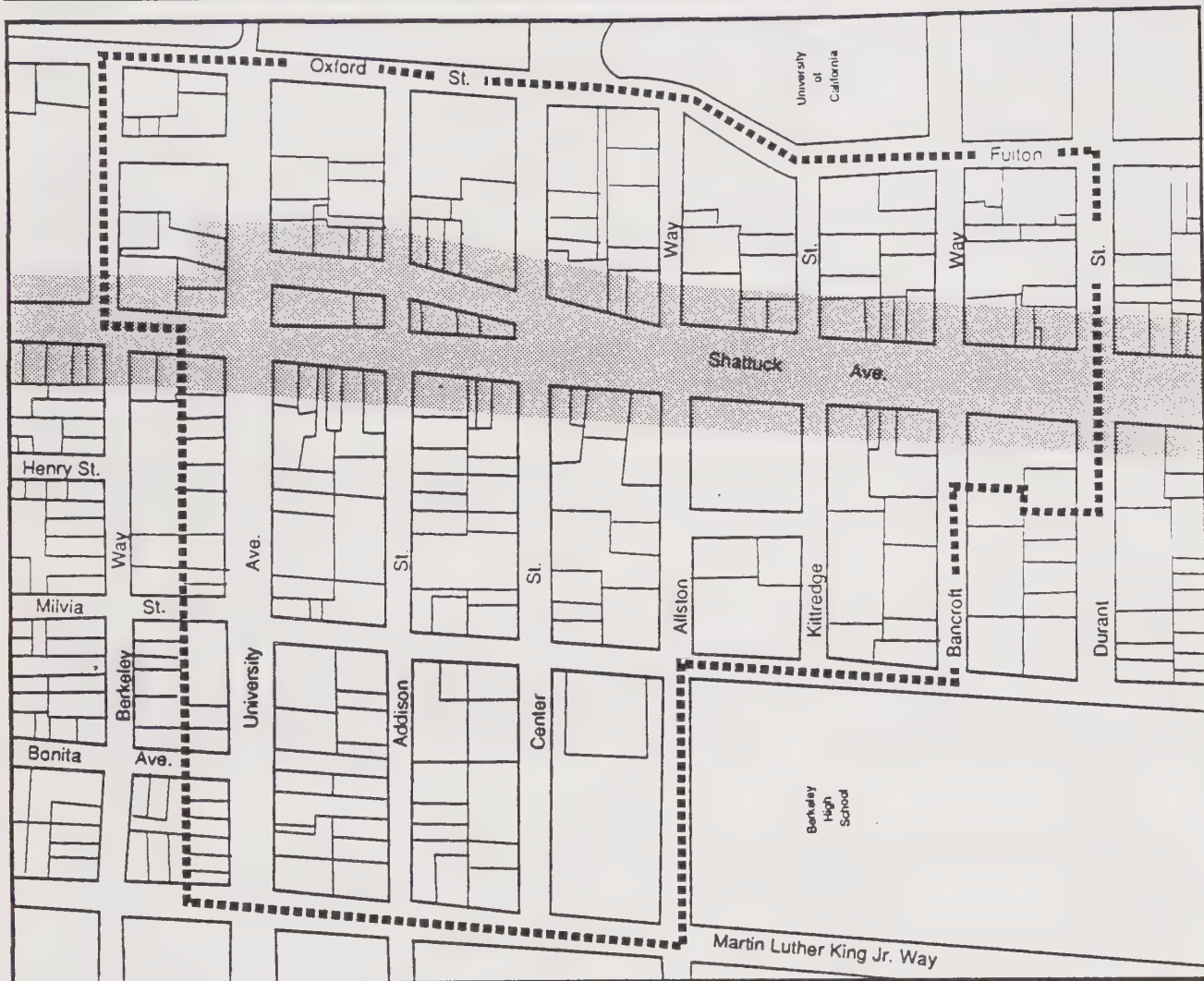
This programmatic change would not be inconsistent with existing goals or policies of the City of Berkeley and would appear, based on both the justification provided in the *Plan* and the existing Landmarks Preservation Ordinance (Chapter 3.32, Municipal Code), to be in step with the City's established policies. The redirection of proposed projects meeting certain criteria to a substitute design review board would not create extra requirements in the review process and could provide for a more focused evaluation of the proposal's treatment of historic characteristics.

Amend Zoning Ordinance to Specify that Housing is a Desired Land Use Along Addison Street, South Shattuck Avenue and in Buffer Areas (p. 32). This change in the text of the Zoning Ordinance could, when implemented by the more specific regulations described in the *Plan*, result in a shift in the trend of Downtown land use composition from office and retail uses toward residential uses. However, for this metamorphosis to occur, the market for housing, the cost of construction, the mortgage interest rate and other influential elements of the development process would have to cooperate. Analyses prepared by the City's Office of Economic Development and by staff in the Campus Planning Office at the University of California suggest that housing in the Downtown is the desired land use that would require the greatest public sector assistance if new dwelling units are to be affordable to a wide range of income levels.

As a relatively general program element, this proposal would not result in significant adverse effects; other land use and planning impacts of increasing the level of housing in the Downtown are considered below under the subsection titled "Impacts Due to New Development Allowable Under the *Plan*". Housing impacts and an expanded discussion of the feasibility question are addressed in the *Socioeconomics* section below.

Maintain Inclusionary Zoning Requirement and Allocate CDBG and Other Funds to Increase Low and Moderate Income Units (p. 34). The City presently has in place an inclusionary housing policy and this program element represents merely the reaffirmation of that policy direction. The allocation of CDBG monies to assist in the provision of housing for low and moderate income households is considered in the section of this EIR on *Fiscal* impacts. At this level of specificity, the program would not lead to significant adverse environmental impacts and, as described in the *Socioeconomics* section below, could have potentially beneficial effects in Berkeley's existing housing shortage.





**Figure 8**  
**Proposed Historic Zoning District**



Exempt Retail Uses from Level of Service "D" Performance Criteria. This proposed ordinance change is recommended in the Circulation and Transportation element of the *Plan* (p. 78). It would give preference to retail land uses by exempting them from the provisions of "Measure S", which was passed into law by Berkeley voters in November 1986. This initiative established the maximum level of traffic congestion Berkeley residents were willing to tolerate as Level of Service (LOS) D (see *Transportation* section of this EIR, p. 130, for description of the level of service concept and categories).

Exempting retail uses in the Downtown from the LOS D standard could lead to a greater amount of retail development than would otherwise occur Downtown, particularly if the LOS D result were to preclude non-retail development, but this land use change would be consistent with the thrust of the *Downtown Plan*. The potential circulation impacts of such a policy change are analyzed in the *Transportation* section of this EIR (pp. 127 to 164).

Restrict Regional Uses in Neighborhood Commercial Districts. Though not described in detail, this policy presented in the Land Use element (p. 108) and again under the description of zoning ordinance changes (p. 117) appears to recommend that neighborhood commercial districts outside of the Downtown be examined with regard to their treatment of new regional-serving retail development so as to insure the success of policies and programs in the *Downtown Plan*. Because the policy is not defined beyond a general recommendation to "review and if necessary revise" the zoning regulations for regional-serving retail uses in neighborhood commercial districts, it would not in and of itself represent a significant change in City policy. However, it is possible that the focusing of regional retail uses in the Downtown could cause changes in the land use pattern that otherwise would have developed in the neighborhood commercial districts.

Policies Proposed for Subareas. Land use policies for subareas of the Downtown are presented under the heading of the *Plan's* second land use objective which emphasizes focusing development in the center of Downtown and minimizing the impacts on adjacent neighborhoods through the type of uses, structures and activities allowed in the buffer areas. Several policies are listed in the *Plan* for each subarea; most policies are described in operational terms in the proposed Zoning Ordinance Amendments section of the *Plan* (evaluated below).

Central Core. Policies for the core area are intended to foster a continuation of the relatively more intense levels of development and high levels of activity currently found there. Five components of this vision are set forth: 1) allow seven-story buildings in specific locations in the core; 2) discourage onsite parking and eliminate surface parking lots; 3) demolish only those buildings that are not historically significant; 4) encourage development on small parcels and discourage their assembly into larger parcels; and 5) require ground floor of buildings to incorporate retail or public uses.

Oxford Edge. The potential for future residential development along Oxford Street and the desirability of fostering land uses that would link the UC campus and the Downtown are stressed in four policies set forth for this subarea. Infill development that would still maintain a sense of openness and visual access to the Berkeley Hills is also listed as a policy. The location of student housing on currently vacant and/or underutilized sites is another policy proposal. None of these policies are refined as to their implementation to the point that their environmental impacts (if any) are measurable.

West Edge/Civic Center. The Civic Center area is envisioned to become an area of greater significance, particularly in terms of its civic character. At the same time, the minimization of the potential impacts of a greater diversity of people and more active use of the civic buildings is critical. Five policies are set forth: 1) encourage cultural and community services to locate in the Veterans Building; 2) develop a design plan for Center Street; 3) find a location for a Youth Center; 4) maintain Civic Center Park as open space; and 5) develop a parking facility in this subarea.

The only policy of these five that could lead to significant adverse environmental impacts is the parking facility which is discussed in the *Transportation* section of this EIR. The other policies are generally consistent with the *Plan* and would be mitigatory in effect.

North Edge/University Avenue. Changes in land use and new infill development that is similar in scale to the existing uses along University Avenue are two themes set forth for this subarea. The operationalization of these concepts is expressed by two policies, one which proposes to encourage the ethnic restaurants and stores which have been emerging along University Avenue and the other which would require that ground floor uses be devoted to retail or restaurant uses. Neither of these policies would result in significant adverse effects.

South Shattuck. The land use policy for this subarea of guiding development which replaces existing auto-oriented businesses toward residential development with neighborhood serving retail and commercial uses on the ground floor would further the *Plan's* goals and would not represent a significant land use or planning concern.

Zoning Ordinance Amendments. In the *Land Use* section, under the heading of "Programs", the *Plan* sets forth a series of zoning ordinance modifications both for changes in use and for new development in the Downtown.

It is important to remember that a plan document like the *Berkeley Downtown Plan* has effects at two levels of specificity: the project description set forth above in Chapter III begins with changes at the individual parcel level and then builds to point out the aggregated results the study area level. It is beyond the scope of a program EIR like this one to analyze the parcel-specific zoning changes brought about by the adoption of the *Plan*. This analysis presents an overview of the *Plan's* effect taken as a whole, and recognizes that individual properties will be affected by the *Plan's* regulations and incentives based on site features and context.

Process and Overview of Zoning Changes. Implementation of the *Berkeley Downtown Plan* will require a choice between two routes: 1) prepare and adopt a specific plan for the study area; or 2) amend the Zoning Ordinance for the C-2 category and reclassify those parts of the Downtown that are currently C-1 to a buffer zone category. In either case, the regulations and incentives provided by the *Plan* would have to be specifically applied to each of the subareas.

The purpose of the proposed zoning changes is, among other things, to encourage residential uses in the buffer areas and the Oxford Edge subarea, while still allowing some small scale commercial and retail uses; mixed uses are preferred in the core area. The *Plan* also notes that, in evaluating new projects, "changes in use and improvements to existing properties are preferred over demolition and new construction when feasible".

Two primary methods of promoting these types of uses include bonuses in a project's floor area ratio (FAR)<sup>6</sup> and maximum height as well as "a streamlined permit process for projects that are in exact conformance with *Downtown Plan* regulations".

---

<sup>6</sup> Floor area ratio is calculated by dividing the gross floor area of all buildings on a lot by the lot area. For example, a two-story building of 30,000 square feet on each floor (60,000 square feet total) located on a 40,000 square foot lot would represent a floor area ratio (FAR) of 1.5:1, sometimes simply written 1.5.



Floor Area Ratio. New development in the Downtown would be permitted with an FAR of 4 throughout the Central Core subarea, 3.5 in the Oxford Edge subarea and 3 in each of the other subareas. In the Central Core subarea, projects with a minimum of 100,000 square feet of retail space could be granted an additional FAR unit of 2.0. Proposals for the Oxford Edge and other buffer subareas that include a minimum of 75 percent of the project's gross square footage in residential use would be permitted an additional FAR unit of 1.0.

Current C-2 zoning allows for a floor area ratio of 6.0 and does not allow for any increase in FAR under a bonus program. The transitional area subject to amended C-2 regulations was restricted to an FAR of 3 at the time of the zoning ordinance revisions in 1986.

Heights. Three different height limits are proposed for the Downtown study area, and are based on the subarea in which the property is located. Figure 9 shows these proposed heights for the *Plan* under the base and maximum bonus assumptions. The bonuses apply in the case of Central Core subarea projects with 100,000 square feet of retail space and other subarea projects with 75 percent or more of housing. These proposed heights (including the bonus heights) represent a reduction from the current C-2 zoning which permits 100 foot high buildings throughout the Downtown.

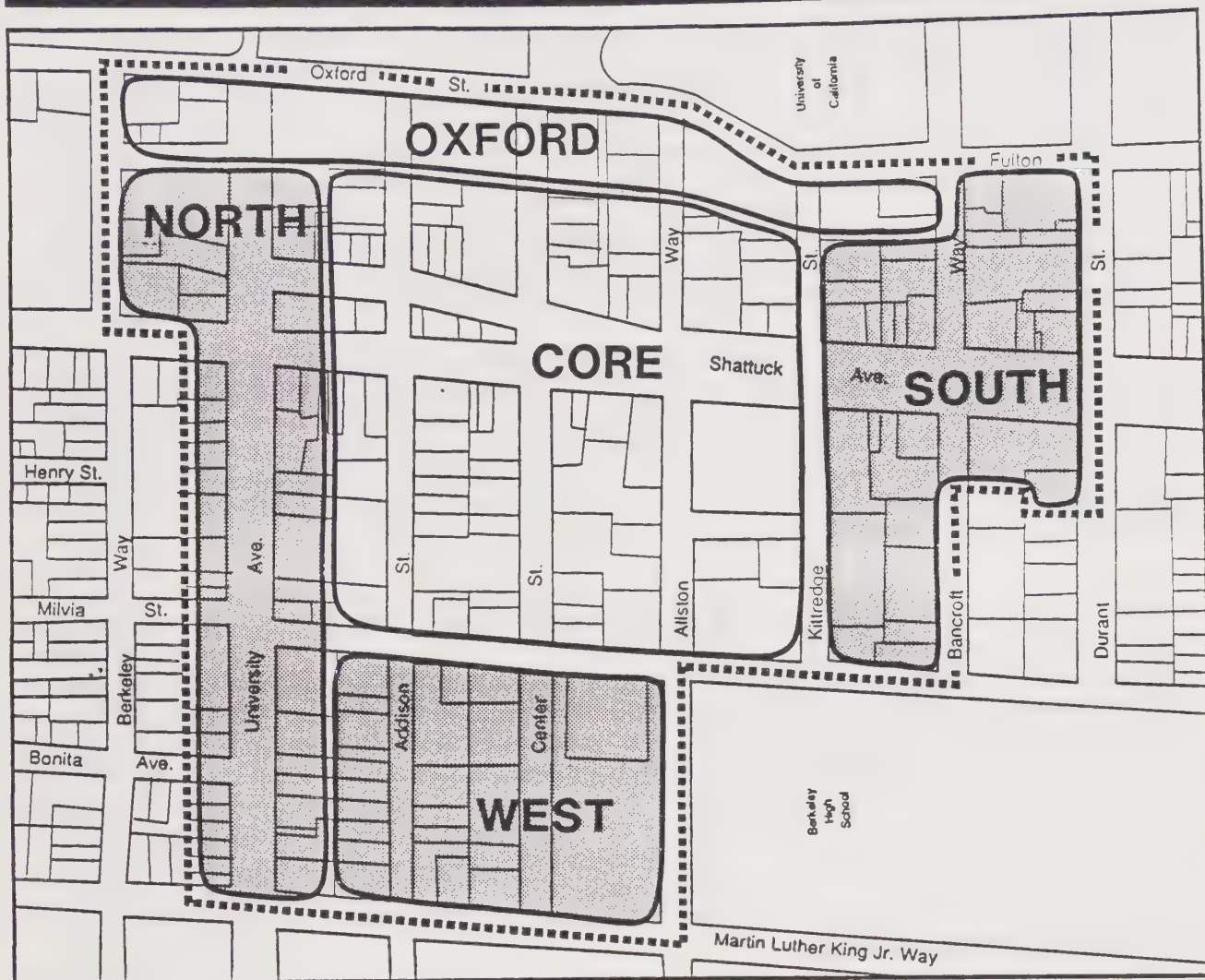
Current C-2 zoning allows for a maximum height of 100 feet (9 stories) for all land uses. The two-block area subject to amended regulations has a height limit of 50 feet (4 stories).

Uses Permitted. Under the proposed *Berkeley Downtown Plan* use permits would be required for all commercial, business, residential, cultural, recreational and educational uses in the study area. Ground floor space would have to be occupied by commercial, cultural or retail services. As a way of increasing the level of nighttime activity, extension of operating hours to midnight as of right is also proposed. The zoning ordinance amendments or specific plan regulations would include special regulations on the number and type of restaurants (especially fast food establishments), offices and financial institutions occupying ground floor/street frontage space or the expansion of auto-related uses. Industrial and manufacturing uses would be generally prohibited; surface parking lots would be restricted to the buffer and edge areas of Downtown.

Changes in Use. When existing commercial uses located on the ground floor are proposed to change, the new use would have to be either "retail, cultural or other publicly accessible uses". Activities above the ground floor, if not proposed for a change to retail, would have to provide parking at the standard rate; proposed changes to retail would be exempt from the parking requirement. The *Plan* also mentions that proposals for a change in use "that meet Downtown Plan requirements" would be permitted by right.

Those changes requiring use permits would be subject to specific criteria for each of the study area subareas, stemming from the policies set forth for each subarea described above (p. 53).





Downtown SubArea	Proposed Zoning
Core:	Base maximum height of 65' (5 stories) Up to 87' (7 stories) with special bonuses.
Oxford Edge:	Base maximum height 50' (4 stories) Up to 75' with residential bonus.
Buffer Edges:	Base maximum height 40' (3 stories) Up to 60' (5 stories) with residential bonus.



**Figure 9**  
**Proposed Zoning Regulations for Subareas**

### Central Core.

- ☐ Uses that will increase diversity and enhance pedestrian activity are encouraged.
- ☐ Office uses on the ground floor are would not be permitted.
- ☐ Design review guidelines would help connect ground floor uses to the street.
- ☐ No surface parking would be permitted.
- ☐ Along Addison Street, changes from auto-oriented uses would be encouraged.
- ☐ Retail uses would be required along Shattuck Avenue.

### West Edge/Civic Center.

- ☐ Uses along Martin Luther King Jr. Way would be limited to institutional or civic uses, residential and small scale commercial services, all of which would be permitted by right.
- ☐ Retail uses larger than 5,000 square feet would require a use permit.
- ☐ Changes of use in a single building that would result in a total of 30,000 square feet of retail or other commercial space would require a use permit.

### Oxford Edge.

- ☐ Permitted by right as desirable uses would be housing (either as an all-residential project or mixed-use project), commercial services, university-related research and development, cultural and entertainment facilities, and restaurants.
- ☐ Business and commercial services or cultural uses would be required on street frontages throughout this subarea.

### North Edge/University Avenue.

- ☐ Permitted by right would be residential or commercial uses above the ground floor and retail or other commercial at the ground floor/street frontage.
- ☐ Retail uses larger than 5,000 square feet would require a use permit.
- ☐ Changes of use in a single building that would result in a total of 30,000 square feet of retail or other commercial space would require a use permit.

### South Shattuck.

- ☐ Housing and small-scale commercial services would be permitted by right.
- ☐ Retail uses larger than 5,000 square feet would require a use permit.
- ☐ Changes of use in a single building that would result in a total of 30,000 square feet of retail or other commercial space would require a use permit.

These criteria would be applied by decisionmakers in Berkeley to requests for use permits and as such would not directly result in significant impacts from the CEQA perspective. The level and mix of additional development likely to result from their implementation is part of the project description for the two *Plan*-based alternatives examined throughout this EIR.

However, it is important to remember that the preferences outlined above to be used in the evaluation of change of use requests will not necessarily result in new development of the uses that are to be encouraged. A variety of other market factors will strongly influence the type and pace of Downtown development.

New Construction. The threshold of development below which new construction would be subject to staff administrative review only (conformance with the *Plan* and CEQA review) is 30,000 square feet, as long as the project does not exceed the base permitted FAR and height. Projects of more than 30,000 square feet would require a use permit.

A variety of other development controls are also set forth addressing such characteristics as building orientation (and its effect on wind patterns, historic resources and important views), solar access, yards/setbacks and lot coverage. No adverse impacts would result from their implementation.

Parking Requirements. The potential environmental impacts of the *Plan's* proposed parking standards are evaluated in detail in the *Transportation* section of this EIR (pp. 127 to 164).

Those standards would reduce the current requirement under the C-2 Zoning designation of 2.0 spaces per 1,000 square feet of commercial space to 1.5 spaces per 1,000 square feet, with the following exceptions: (1) new retail projects of 100,000 square feet or more in the core subarea; (2) changes in use to retail within existing buildings. These projects would be exempt from parking requirements.

Residential development would be required to provide parking at a rate of one space for each unit with the following exceptions: (1) residential projects along University Avenue or Shattuck Avenue would require one space for every two units; and (2) projects in the central core subarea would only require one space for every three units. This compares with the current requirement of 1.0 space for each unit (or 1.0 space for every 1,000 gross square feet of residential space) throughout the Downtown.

Demolition of Existing Structures. Demolition of any historic structure would be discouraged through changes in the Zoning Ordinance and continued operation of the City's Landmarks Preservation Ordinance. A full discussion of this policy is contained in the *Urban Design and Visual Impacts* section below (pp. 69-118).

### Impacts Due to New Development Allowable Under the Plan

Impacts Common to One or More Alternatives. When compared to the existing land use context, all four of the alternatives would allow for additional increased levels of new development or renovation and intensification of existing uses. Measured against the base case conditions, the level of net new growth would vary from about 275,000 square feet of new office and retail space with nearly 700 dwelling units under the Low Intensity Alternative, to over 1.1 million square feet of office and retail space under the No Action Alternative.



The effect of the regulatory incentives for retail and housing land uses (under all but the No Action Alternative) when combined with the variety of policies aimed at increasing pedestrian activity, enhancing safety, maintaining the area's human scale, and encouraging respect for historic resources, would all guide future Downtown growth and alter its course at least somewhat. The key variables affecting how widespread and noticeable the changes would be, and how quickly they would occur, include the level of commitment shown by the City to their implementation, and market factors which will affect the response of the development community to the *Plan*.

The preparation of this *Plan* has been under way for several years, and recent development proposals suggest that developers have already begun to incorporate its general themes into their project concepts. On the other hand, some business operators or landowners may have to reconsider intentions they had that would not be consistent with particular aspects of the *Plan's* proposed changes. As with any general plan or zoning regulation, parcel-specific circumstances may provide grounds for appeal of the *Plan's* provisions applicable to an individual project.

The consequences of the *Plan*, both the beneficial results noticed by users of the Downtown and the potential adverse consequences that can result from changing the rules under which development occurs, will be experienced over many years and will occur alongside of other changes in the Downtown that are independent of City incentives and regulations.

The fact that most parcels in the Downtown are already developed to a relatively intense degree and that nearly all of the new construction occurring over the life of the proposed *Plan* would take place on the 24 parcels listed in Tables 2-6 leads to the conclusion that the magnitude of change in this context will be less and the pace slower than it might be in other settings, where the potential for new development or wholesale redevelopment of existing structures is enhanced by rundown conditions or prolonged disinvestment (e.g., portions of West Berkeley).

As in any relatively dense urban setting, new construction and substantial renovation could lead to displacement of existing commercial tenants and residents. Whether, and if so, how fast, this impact could occur would depend on a variety of factors which lie beyond the scope of this program EIR.

In addition to intended land use changes within the study area, it is possible that accomplishment of the *Plan's* objectives for increased pedestrian activity, additional regional retail development and other economic revitalization could have beneficial spillover land use effects in nearby commercial areas. If such spillover effects do occur, they hold the potential to include adverse counter-effects including unintended land use changes and rent increases for commercial tenants.

Impacts on other urban systems or other environmental topics are analyzed throughout this chapter. For instance, the effect of height and FAR on visual and historic resources, or of the resulting increased traffic on all forms of transportation, are specifically addressed in those topical sections below. Potential cumulative and growth-inducing effects of the alternative levels of additional development are addressed in Chapter V below.

Impacts Specific to Alternative 1. Under a continuation of existing development trends, the Downtown would experience a net growth in office space of a little over one million square feet and just over 132,000 square feet of retail space (see Table 3). This additional space when compared with current levels would represent an increase of 77 percent for office uses and 13 percent for retail uses. As noted in the project description, no new residential units have been attributed to the study area under this alternative, although it is possible that a small number could in fact be constructed.

A key impetus behind the Downtown planning process (as it is described in background documents) is that a land use future based on trends experienced in the Downtown in recent years is unacceptable to the majority of residents, employees and visitors. Opposition to the form of development exemplified by Alternative 1 appears to be based on several environmental and economic factors discussed in other sections of Chapter IV.

Impacts Specific to Alternative 2. The total amount of new development allowable under this alternative is about 85 to 90 as much as could occur under Alternative 1, though the composition of the new growth would differ substantially. The *Plan* emphasizes retail and housing uses, and this first of two *Plan*-based alternatives (in which allowable density bonuses are excluded) would allow for nearly 609,000 square feet of office space, 208,837 square feet of retail and 201,000 square feet (268 units) of housing (see Table 4). These levels of net new development would represent the following percentage increases over existing levels within each category: office, 45 percent; retail, 21 percent and residential, 46 percent.

Under either of the two *Plan*-based alternatives, the encouragement given to retail, entertainment and cultural uses and activities could provide the Downtown with a relative advantage over other Berkeley neighborhoods for these attractions. In this way, an adverse spillover effect on other commercial areas could result.

When compared to existing conditions in the Downtown, this alternative would represent a more intense level of development by nearly half. Both the level of office development and numbers of residential units would be noticeably greater than at present. Given the historic use of the Downtown as a center of employment and other activities (e.g. entertainment, culture, civic events), this intensification of land uses would not appear to raise compatibility issues at the general level. Development of individual parcels may lead to questions of compatibility and these issues would be subject to review at the time of project review.

Impacts Specific to Alternative 3. This alternative assumes that the available bonuses for additional FAR and height are taken advantage of to the maximum extent possible on all of the 24 parcels. As such, it not only shows a heavy tilt toward retail and residential uses, but also an increase in the total level of net new development allowable. The new development allowed and the percentage increase over existing levels represented by each category are as follows: office, 455,425 square feet (34 percent increase); retail, 395,144 square feet (39 percent increase) and residential, 700,500 square feet or 934 units (161 percent increase).

If the bonus incentives are successful in stimulating the production of even half of the allowable levels of new housing shown in Table 5, this alternative would, with its related activity levels, create a markedly different land use pattern, from the existing condition. In addition to the potential for hundreds of new dwelling units, at buildout it would include slightly over one-third more office and retail development as well, an amount which would probably appear to users and residents of the Downtown as an infilling of existing development.

Impacts Specific to Alternative 4. Removal of potential bonuses and continuation of existing parking requirements while restricting upper floors to residential uses (among other factors) lead this alternative to generate the smallest net increase in total developable space of all four alternatives (797,000 square feet), though it could accommodate the second greatest level of residential growth (522,000 square feet, or nearly 700 units).

An impact resulting from the limits on development imposed by this alternative that could be both significant and adverse from some perspectives would involve the collision of an overabundance of demand for new space and limits on FARs and heights. Other Bay Area communities have experienced the type of development that is proposed under height limits in a booming development market: shorter buildings, but ones which take maximum



advantage of the available building envelope below the height limit. The potential adverse impact is a visual or aesthetic one and is more fully discussed under *Urban Design and Visual Quality* below.

#### Public Improvements or Program Mitigation Measures Included in the Plan

Two major program mitigation measures are included in the *Plan* that would tend to mitigate impacts due to growth in the Downtown area and vicinity.

Revise Zoning Ordinance to Provide for Mitigation of Transportation Impacts. Growth in all three major land use categories would increase the number of vehicular trips into and out of the study area (as projected and analyzed in detail in the *Transportation* section in this chapter below). Insuring that this mechanism for funding needed traffic improvements is operational and fully utilized as part of the development review process in the Downtown could go a long way toward mitigating otherwise adverse environmental effects of growth.

University of California Projects. An entire element (#6, pp. 90-94) of the *Berkeley Downtown Plan* is devoted to a discussion of the beneficial as well as adverse relationships between the University and the Downtown. Existing interactions and the potential effects of future growth are both considered. As part of this element, the City sets forth three objectives with eight policies, four short range capital improvement programs and five studies, some of which are described in other topical sections of this EIR (see pp. 92-94 of the *Plan* for the full writeup of each item).

Frequently, these policies, programs and studies are expressed in the following terms: "encourage the University to ..." or "The University should ...". This sentence construction underscores the fact that few of the potential mitigating effects of this element would occur without the active participation of the University.

To the extent that the City is successful in "encouraging" the University to act in ways that are consistent with these objectives, policies and programs, they would serve as mitigation for University growth and as stimulation for the attainment of the *Plan's* goals and objectives.

#### Additional Mitigation Measures Recommended by this EIR

Remaining Impact 1: Potential Displacement of Existing Commercial Tenants or Residents [Ø]

Mitigation Measure: The City could include in the *Plan* a discussion of existing City policy regarding the rights of commercial tenants and residents and responsibilities of developers when new construction or substantial renovation results in displacement. If not a full discussion, the *Plan* should at least refer the reader to other sources of information on this form of mitigation.

Remaining Impact 2: Potential for Land Use Changes to Fall Short of the Plan's Goals and Objectives Due to Lack of Specificity [⊙]

Mitigation Measure: Prior to consideration of the proposed *Plan* by the Planning Commission, a single staff member with familiarity in all topical subject areas should review the *Plan's* policies and programs with a critical eye toward insuring that they are as clear and explicit as possible. Where language in the February 1988 draft of the *Plan* is imprecise or lacking in full detail, it should be expanded upon. If additional internal inconsistencies beyond any noted in this EIR are encountered, they should be spotlighted and, if necessary, a policy choice made by City decisionmakers.



Remaining Impact 3: Inadequate Market Response to the Incentives Provided in the *Plan* [Ø]

Mitigation Measure: The Office of Economic Development should monitor the response of developers and building owners to the various incentives and regulations in the *Plan* (e.g., land use changes, floor area ratios, heights, parking requirements and allowable bonuses) and report back to the City Council.

That analysis could include interviews with or a survey of members of the development community. A memorandum report could also seek to explain which aspects of the *Plan* are working (and which are not) and why, using illustrative pro forma calculations for proto-typical Downtown development.

In this way, a process for revising the details of the *Plan* could be outlined and adopted as part of the *Plan* itself.

Remaining Impact 4: Potential for Exemption of Retail Uses from LOS D Performance Standard to Result in Unintended Levels of New Retail Development<sup>7</sup> [⊙]

Mitigation Measure: The City's Planning and Community Development Department should monitor the implementation of the LOS D policy (whether and when its provisions are activated) and at the same time observe the number, size and type of retail projects proposed and constructed in the study area. If the program is activated and if retail projects begin to dominate Downtown development activity, the City may wish to reconsider or modify the exemption of retail uses from the provisions of the policy.

Remaining Impact 5: Secondary Impacts of Directing Proposed Regional Retail Outlets into the Downtown [⊙]

Mitigation Measure: The City's Planning and Community Development Department or the Office of Economic Development should monitor the economic health of the City's neighborhood commercial centers to see whether this requirement (that any new retail uses drawing from the regional market locate Downtown) proves to have adverse effects outside of Downtown.

Remaining Impact 6: Potential for Auto-related Uses to Relocate Outside of Berkeley and Reduce the Access of Berkeley Residents to Their Services [Ø]

Mitigation Measure: In order to insure the availability to Berkeley residents of goods and services provided by the auto-related businesses which would be encouraged to relocate outside Downtown, the City may wish to assist these businesses in securing appropriate sites/facilities in other Berkeley neighborhoods.

<sup>7</sup> This remaining impact and its designation as mitigable addresses only the potential land use imbalance question. See the *Transportation* section of this EIR for additional analysis of the retail exemption from the LOS D performance standard.

## SOCIOECONOMICS

### Introduction

The broad topic of socioeconomics considers three closely linked types of impacts: 1) potential changes in the overall level and type of employment; 2) impacts on population, both within the Downtown area in new residential development encouraged by the *Plan* and city-wide as Downtown area jobholders seek to live in Berkeley; and 3) implications for the city's housing conditions.

As with other topics evaluated in this EIR, the analysis looks at these issues both from the perspective of the policies and programs espoused and from the perspective of the four projected alternative levels of physical development which could result from implementation of the *Plan*.

### Existing Setting

Several sources have been used to assemble a concise overview of the existing socioeconomic conditions in Berkeley; data for the Downtown area have been specifically cited where relevant and up-to-date. The following descriptions of current employment, population and housing conditions generally refer the reader to other *Berkeley Downtown Plan* documents rather than reproduce in tabular form data which is cited there. The data and findings on the existing conditions in these topical areas are useful as benchmarks against which impacts, forecast below in subsequent sections, can be compared.

Employment. This subsection describes the Downtown and Citywide business and employment context.

Downtown Berkeley Employment. The total number of employed persons in Downtown Berkeley is somewhere between 7,800 and 8,000. These jobs are split almost evenly between private and public sector employment. Adding the nearly 11,000 University of California Berkeley employees working nearby but outside of the Downtown study area, one can surmise that Downtown Berkeley's employment setting (including those goods-and-services positions which cater to the University's students and employees) is characterized by very gradual changes in overall levels. As summarized by a background report prepared by the City's Office of Economic Development, the heavy public sector presence "provides a stabilizing influence in the Downtown economy".<sup>8</sup>

Citywide Employment. By way of comparison, estimated citywide total employment is approximately 58,000, with nearly 19,000 jobs in the public sector and over 39,000 jobs in the private sector.

Types of Businesses in the Downtown. The more than 4,000 private sector jobs in the Downtown are heavily concentrated in the industrial categories of "services" and "retail trade". Employment in these two categories (1,970 and 1,420 jobs respectively) represents over 83 percent of all private sector employment in the study area. The next largest group of private sector employees in the Downtown (204) work in the "finance, insurance and real estate" category.

---

<sup>8</sup> City of Berkeley, Office of Economic Development and Department of Planning and Community Development, *Downtown Plan Working Document - Economic Information*, September 1987.



Private sector employees in Downtown Berkeley work in 714 individual businesses, constituting six percent of the citywide total number of businesses, based on business license data collected by the City. More than 20 percent of the City's finance, insurance and real estate firms and over 10 percent of the City's service and retail businesses are located Downtown. No other commercial district in Berkeley has a greater concentration of these types of firms.

Looking more closely at the retail sector, which is perhaps the key sector from the perspective of the *Plan*, the importance of eating and drinking places stands out. Over 70 of these establishments can be found within the Downtown study area, and in the years between 1983 and 1986, these establishments grew by 15 outlets. There are over 120 other retail outlets as well.

Downtown Berkeley is characterized by small businesses. Roughly 88 percent of all businesses in the Downtown have fewer than 10 employees and only 4 percent employ more than 25 persons. However, in terms of the number of jobs provided, the 4 percent which are provided in larger businesses account for over one-third of all private sector jobs in the Downtown.

Commercial Vacancy Rates. Vacancy statistics for most types of commercial space in the study area are not compiled. However, data assembled by private real estate brokerages for multi-tenant, competitive office buildings with more than 10,000 square feet suggest that during the 1980's Downtown Berkeley has maintained a relatively healthy position with regard to other nearby cities in Alameda County. Berkeley's vacancy rate for this type of office space has fluctuated between 3 and 12 percent whereas other cities have ranged up into the 20, 30 and 40 percent vacancy levels, with the county aggregate average ranging between 7 and 23 percent in recent years.<sup>9</sup>

The relocation of the Office of the President of the University of California from Downtown Berkeley to Oakland are not reflected in these data. Another notable decrease in the "general merchandising" subsector of Downtown retailing was the closing of Hinks Department Store on Shattuck Avenue.

Recent Development Downtown. The trend in Downtown employment in recent years has been influenced greatly by the development of several office and mixed use projects. Examples include the Golden Bear, Teknekron and Berkeley Towers developments, which together added 212,000 square feet of office space to the Downtown. Office space added by the nine largest projects in the study area in the past five years equals 350,000 square feet; retail space as part of these nine projects amounts to 75,000 square feet. Only recently, however, have proposals been discussed which include housing as part of new development in the Downtown.

Citywide Employment Trends. Despite the addition of this new job-generating space, the comparison of current employment statistics with those of recent years show a decrease in the total number of jobs in Berkeley and a concomitant increase in unemployment. In 1985 the employed labor force in Berkeley was about 61,600 or 3,000 more than the current total.

In *Projections - 87*, the Association of Bay Area Governments (ABAG) forecast that the number of jobs in Berkeley would rise to about 67,800 by the year 2000.

---

<sup>9</sup> Coldwell Banker Commercial Real Estate Services, as cited in *Downtown Plan Working Document - Economic Information*, September 1987.



Composition of Berkeley's Labor Force. It is important to remember that jobs in Berkeley are filled by workers from throughout the region. Only a fraction of the employees hired for new jobs in Berkeley (including the Downtown area) would also live in Berkeley. The City's Office of Economic Development estimates that, on average, about 30 percent of new jobs in Berkeley would go to people who either already live in Berkeley or who would move in after being hired.

The labor force that would supply jobs for the Downtown is comprised of several subgroups including those who are: 1) already employed but seek advancement, a career change or different location; 2) those who are presently unemployed or under-employed, but looking for employment; and 3) those who are no longer looking for employment because they do not believe a suitable job can be found. Recent studies of job growth and unemployment show several characteristics to be influential in one's position within these groups including educational level, age, skill level and past experience. Because of the need to match job requirements to the skills and experience of those persons available for work, additional jobs do not necessarily mean reduced unemployment for Berkeley residents. The City's "first source" employment program formally recognizes this condition and requires employers (those subject to its regulations) to seek local residents for new positions. (See both Mitigation Measures sections below for further discussion of the first source hiring program.)

Existing Employment on Parcels with Additional Development Potential. On the basis of known square footages for existing development on the 24 parcels designated as having additional development potential (shown in Table 2), it is estimated that between 400 and 600 jobs exist in businesses found on those parcels.

Population. Downtown and citywide population characteristics are summarized in this subsection.

Downtown Berkeley Population. The population in the study area in 1980 (the most recent reliable data for the Downtown are from the 1980 census) was approximately 880 residents. The *Plan* document points out that the highest concentration of Downtown residents is found in the residential hotels along Shattuck and University Avenues.

Age and Racial Makeup of Downtown. The age breakdown of the study area population shows a very small proportion of the very young and approximately 22 percent who are over the age of 65, mostly living in one retirement hotel on Shattuck Avenue; the majority (73 percent) are between the ages of 18 and 65. The racial makeup of the Downtown's population includes approximately 76 Caucasian and Other, 12 percent Asian and Pacific Islander, 9 percent Black, and 4 percent Hispanic.

Population Trend in Downtown Berkeley. On the basis of anecdotal evidence compiled from Downtown merchants and staff, the residential population trend in the Downtown study area since 1980 has held just about even; no new units have been added, moved, demolished or converted, though some doubling-up in existing units may have occurred.

Citywide Population. The Citywide population in 1988 has been estimated at 106,800<sup>9</sup> which represents a slight decline over recent years in the mid-1980s. At the start of the decade, in 1980 the population was 103,328.<sup>11</sup>

<sup>10</sup> State of California, Department of Finance, Population Research Unit, *Population Estimates of California Cities and Counties*, July 1, 1987 to January 1, 1988, Published May 1988.

<sup>11</sup> Association of Bay Area governments, *Projections '87*, p. 80.

In *Projections - 87*, the Association of Bay Area Governments (ABAG) forecast that the total population in Berkeley would decrease to about 102,500 by the year 2000.

As a portion of the City's population, the study area accounts for less than 1.0 percent.

Housing. Data on housing are not available nor easily calculated for that portion of the City represented by the study area. Furthermore, a majority of the available citywide data are now eight years old (having been collected at the time of the 1980 census). However, the estimated Downtown population of 880 and the knowledge that a large proportion of Downtown residents are single-person households living in residential hotels, allows the conclusion that the Downtown probably includes between 500 and 700 dwelling units (if residential hotel rooms are included).

Regional Housing Conditions. Housing in the San Francisco Bay Area region is among the most expensive in the entire nation. The relatively high cost of housing is due to a variety of supply and demand factors. On the demand side several ingredients including the strength and diversity of the regional economy, the climate, the quality of life and number of acclaimed educational institutions all contribute to strong demand for housing. Constraints to supply including the high cost of land, scarcity of developable land, impact fees and local land use policies all have contributed to a lesser level of housing production than that which would meet the needs of Bay Area residents, particularly in selected submarkets (i.e., housing for low and moderate income households, especially families).

Two recent analyses which examine the issue of the feasibility of constructing residential space in the Downtown have been published over the past year.<sup>12</sup>

The financial elements of a privately developed project (with City and federal subsidies) were considered by staff from the City's Office of Economic Development (OED). Their analysis found that large gaps between the cost of building the project and return to the owner would result, even using very optimistic assumptions regarding available subsidies, allowable development density, land preparation costs and available interest rates. That analysis also implicitly raises the point that any large increase in housing units in the Downtown would depend upon, and influence, the market for housing there: the market for rental housing at the likely cost of such units has not yet been tested in Downtown Berkeley.

In another study, this one prepared by the UC Campus Planning Office, UC student housing on a prototypical downtown site was examined. That analysis showed that per-student rents would be well above current levels even under optimistic assumptions. Factors which could contribute to a reduction in the high costs include favorable bond financing, exemption from City regulations and the carrying costs that result, and the exemption from property taxes, all areas in which the University enjoys a relative cost advantage over private developers.

---

<sup>12</sup> City of Berkeley, Office of Economic Development and Department of Planning and Community Development, *Downtown Plan Working Document - Economic Information*, September 1987, pp. 19-21; and University of California, Campus Planning Office, Memorandum to Dorothy Walker from Jacqueline Bernier on the "Relationship Between Development Costs, City Regulations and Rents for the Shattuck and Channing Student Housing Project", April 27, 1988.



Citywide Housing Stock. Citywide, the number of residential structures is approximately 26,250, providing 45,400 year-round units. This total is based on an ongoing tally compiled by city staff<sup>13</sup> and when compared to the 1980 census total represents an increase of about 575 units; At the time of the Census, 44,825 year-round units were counted.

Vacancy Rates. The vacancy rate for owner-occupied housing in Berkeley has decreased steadily since the 1970s and is currently estimated at 1.0 - 2.0 percent. Rental units operate in an even tighter market with most knowledgeable housing market observers estimating a rental vacancy rate of less than 1.0 percent.

University of California Student Housing. While 6,096 bed spaces are currently operated by the University of California and another 3,638 beds exist in cooperatives, fraternities and sororities, a recent study<sup>14</sup> found that 63 percent of UC students not living on-campus or in University-affiliated units live within the City of Berkeley. A large proportion of the campus' academic personnel and other staff also live in Berkeley. In an attempt to increase its share of the supply of student housing, the University has recently obtained approvals for 760 beds of new student housing at the Foothill site (on the northeast edge of the campus) and is planning an additional 157 beds in a project on the southeast corner of Shattuck Avenue and Channing Way, just outside of the Downtown study area.<sup>15</sup> Another 60 units are planned for the La Loma/Ridge site.

City Program for Mitigation of Adverse Housing Impacts. As part of the City of Berkeley's review process for proposed new development, a Housing Mitigation Program has been designed which links the increased demand for housing in Berkeley (specifically the demand for, or adverse effect on, units housing lower income and very low income households) with a mitigation fee to be paid by the developers of new projects.<sup>16</sup> This program involves a ten-step analytical process that is summarized below:

1. Calculate the net addition of gross floor area attributable to the project.
2. Estimate the level of new employment.
3. Estimate the number of new employees who will reside in Berkeley.
4. Estimate the number of new employees who will move to Berkeley.
5. Convert #4 from employees to households.
6. Distribute new employee households across occupational categories.
7. Estimate number of new employees who qualify for housing assistance.

[Steps continue on next page.]

<sup>13</sup> *Housing Stock Changes Report*, prepared by Nathan Landau, August 6, 1986.

<sup>14</sup> Mundie & Associates, *Technical Background Report on the Subject of Socioeconomics*, October 1987, based on data from the Student Housing & Transportation Survey, Winter 1984, Table 13.

<sup>15</sup> See Table 45 in Chapter V below for details on both projects.

<sup>16</sup> Memorandum to Neil Mayer, Assistant to the City Manager for Economic Development on the subject of Documentation of Linkage Between Commercial and Industrial Development in Berkeley and Need for Low and Very Low Income Housing in Berkeley, August 2, 1988.



8. Adjust for multiple-wage earner households.
9. Estimate the per unit housing subsidy.
10. Calculate the total housing mitigation fee.

This process is used below (in the subsection on Impacts Due to New Development Allowable Under the *Plan*) to compare the magnitude of housing impacts that could result from the four Alternatives under evaluation in this EIR.

City Program for Mitigation of Adverse Impacts on Childcare Services. As in the area of housing, the City of Berkeley will soon implement a systematic program for the mitigation of measurable adverse impacts on childcare services. The analytical process used to calculate these impacts is similar to that described above for housing; in addition, it makes assumptions as to the age group served, the number of households with all parents working, multiple child families and those employees who prefer to have childcare at their place of work.

#### Policies and Programs with Socioeconomic Consequences

One program and one objective in the *Downtown Plan* could result in potentially significant adverse socioeconomic impacts across all subareas. In addition, each subarea could be differentially affected by policies or programs and subsequent zoning ordinance changes. As noted above in the *Land Use and Planning* section, the format established for this EIR locates analysis of the potential adverse effects of policies and programs in this subsection whereas the beneficial or mitigating aspects of the *Plan* are considered below (pp. 77 and 78).

Identify Target Sites and Expedite Permit Processing for Housing Construction. This program (p. 33) lists four different sites for targeting: 1) the northeast corner of Walnut and University; 2) the north side of Addison between Milvia and Martin Luther King Jr. Way; 3) the north side of Addison between Milvia and Shattuck; and 4) the northwest corner of Oxford and Durant. Each site (and any development proposed thereon) would be subject to environmental review at the time a specific project is proposed. Their nomination as part of this *Plan* is not a significant impact.

Another element of the program, expediting permit processing for housing construction, is not defined in enough detail at this stage for a conclusion to be drawn as to its effects. It is important to remember that unless the City resources devoted to the work programs for the Planning Department and Office of Economic Development are augmented, this priority could tend to displace activities currently undertaken by staff. The most direct manifestation of this tendency could extend the length of time required for processing of other projects not designated for expeditious processing.

Insure That There is a Balance Between Revenues and Expenditures. Objective 4 of the Economic Element of the *Plan* is followed by three implementing policies (p. 59). The first (determine fiscal impacts of downtown development [prior to approving new development]) and third (investigate development incentives to encourage appropriate downtown development) are not likely to raise CEQA issues. However, the following text is included as the second policy:

Insure that all public and private development Downtown contributes positively to the Downtown and pays its share of development costs and impacts associated with housing, traffic, transit, parking infrastructure and other impacts as may be identified. [Emphasis added]

If the City adopts and applies this policy consistently to all development, there exists the possibility that it may run counter to policies aimed at promoting other land uses or particular projects (e.g., residential, cultural, entertainment and other public facilities). Of course, the definition of "contributes positively" is arguable and may not always be interpreted to mean the same as "provide a net fiscal benefit" to the City.

### Impacts Due to New Development Allowable Under the Plan

Both the Amount and Land Use Mix of New Growth Affect Socioeconomic Impacts. The broad land use categories projected to experience growth in the Downtown study area (retail, office and residential) vary in the rate at which they lead to new jobs, population and demand for housing. For instance, a given amount of restaurant space generates a greater number of total jobs than that same amount of space in a department store. As shown in Tables 2 through 6 above, the four alternative levels of development contain differing absolute amounts of new office, retail and residential development. The following section combines these factors (the amounts of net new development allowed and the rate at which the mix of land uses would create new jobs) and addresses the potential socioeconomic impacts of each alternative.

Methods of Projecting Gross Employment. Calculations of the employment generating potential of each alternative are based on average employment densities (square feet of space per employee) compiled and used by the City's Office of Economic Development (OED)<sup>17</sup> and are consistent with employment densities elsewhere in the Bay Area as well. Office workers are assumed to require approximately 275 square feet per employee. Retail land uses generate employment at a rate of roughly one job for every 500 square feet, except for eating and drinking establishments (comprising about one half of Berkeley's Downtown retail jobs) which are much more labor intensive, at one job for every 170 square feet.

The occupational composition of employees has also been estimated based on data provided in OED studies.<sup>18</sup>

*It is important for the reader to remember that two different "types" of employment are discussed at different points in this EIR: 1) the occupational distribution (introduced above) is estimated for total net new employment that would result from new development or major renovation of the 24 parcels with additional development potential shown in Table 13; and 2) employment causing housing impacts (described below) is a subset of the total net new employment and includes only those new workers who would reside in Berkeley but who do not presently live in Berkeley. Both of these findings take into account the replacement of about 400 to 600 jobs in businesses on the 24 parcels shown in Tables 2-6.*<sup>19</sup>

Method of Projecting Population. Population projections for new Downtown residential development are based on a conservative estimate (one intended to insure that the potential population impact not be underestimated) of 2.0 persons per new household. This point estimate is consistent with long term projections of household size citywide in Berkeley and would not be exceeded in the Downtown area where household sizes would tend to be smaller, rather than larger.

<sup>17</sup> See Footnote 8.

<sup>18</sup> See Footnote 8.

<sup>19</sup> This approximation represents a very conservative estimate of the existing levels of employment in businesses located on the 24 parcels that could form the basis of new development in the Downtown. The method used to reach this estimate assumes that the businesses on these parcels have employment densities (employees per 1,000 square feet of space) that are as high as the averages used for new development, a condition which is almost surely overly conservative (i.e., likely to overestimate existing employment levels).



This EIR projects the population impacts of the four alternatives for the Downtown study area on the basis of new dwelling units included in the project description; citywide population impacts are calculated as part of the housing impact analysis and take into account residential patterns of persons employed within the City of Berkeley (i.e., the fact that some of the new jobs would be filled by persons who would continue to reside outside of Berkeley). The aggregate effect of these two countervailing impacts (encouraging the construction of new housing Downtown and increasing demand pressures for selected segments of the population due to growth in jobs) is also discussed for each alternative.

Method of Projecting Housing Impacts. As noted above in the setting subsection, the City has been formulating a program to insure that adverse environmental impacts on the local housing market (particularly for that segment of the market with very low and low incomes) be mitigated by the sponsors of the projects causing the impacts. A methodology has been designed to quantify these impacts in terms of the number of households in the two groups with special housing needs (very low and low income) that would be adversely affected by the locally increased demand for housing brought about by new development. (See the Setting subsection above, p. 67, for a detailed description of methods and assumptions). Presented below are the results of these calculations for each alternative as though the total impact of each were the result of a set of specific development proposals. From a CEQA perspective, the impact and mitigation would derive from the subsequent development (and not the proposed *Plan*); each development proposal would be subject to environmental review and detailed calculation of impacts. However, the comparison here is instructive in that it allows an order of magnitude look at the differences among the alternatives.

Method of Projecting Childcare Impacts. The increase in demand for childcare services in Berkeley and the effect on households of low- and very-low income resulting from new employment and residents is also projected using methods that are consistent with those used for housing. (See the Setting subsection above, p. 68, for a detailed description of methods and assumptions).

Secondary Job Generation. Some new retail and service jobs would result from demand by that portion of the new development Downtown that is "basic" (a term from the field of economics which means that the goods or services produced in the basic industry bring money into the local economy from outside). Basic industries are often thought to be comprised only of firms like heavy manufacturing or mineral extraction, but in Berkeley's case, many of the office uses Downtown function as basic industries. For instance, the UC Office of the President and State Department of Health Services (DOHS) fit this definition. Non-basic ("local-population-serving") jobs are those which provide goods and services to basic industries.

In conventional project-by-project impact analysis, employment multipliers can be used to project these indirect employment gains. However, in the case of this analysis of Alternatives to the *Downtown Plan*, several factors counsel against using the standard mathematical approach.

First, the project description under evaluation has been defined as including development in the non-basic sector (i.e., the retail land uses and a portion of the office development). This EIR does not analyze market demand for Downtown development and therefore no segregation of the net new uses into basic versus non-basic is defined. For these reasons, this EIR does not project the extent to which new basic business activities internal to the Downtown would generate new secondary activities.



Second, a large portion of the businesses Downtown, in all the major land use categories, are themselves indirect businesses - the spinoff of other basic activities. They would not have as great a multiplier effect.

Third, two of the largest of the Downtown's basic employers in recent history are either moving out of Berkeley (UC Office of President) or are considering such a move (DOHS), introducing a significant level of uncertainty into the picture. The actual effects of these departures over the long term are presently being studied by the City's Office of Economic Development.

Fourth, it should be remembered that regional economic activity causes its own effects which manifest themselves at the local level. Another way of stating this point would be to say that allowing new development in the Downtown, even basic development from the perspective of Berkeley or the greater Bay Area, is not necessarily growth inducing: a great deal of the region's growth will continue to occur regardless of policies in Downtown Berkeley; it is merely a question of where the new businesses will locate. In this way, the new basic job growth in Downtown Berkeley is not so much "created" as it is "captured".

While quantitative secondary employment projections are not suitable in this program EIR, it is clearly the case that all four alternatives would either generate some net new secondary jobs or would support those basic jobs created by development allowed in the *Plan*.

All socioeconomic projections are summarized for the four alternatives in Table 13 (p. 77).

*Readers should note that, as with all analyses presented in this EIR, impacts on local employment, population and housing are potential, and for purposes of this CEQA analysis, represent reasonable worst case levels. Whether and how the real estate market and private developers respond to the new incentives and regulations will determine how near these maximum levels the experienced impacts will be and the rate at which they will come to pass.*

Impacts Common to One or More Alternatives. Before socioeconomic impacts under each alternative are outlined, this subsection provides an overview of the broad trends likely to occur in employment, population and housing under any of the alternatives.

Employment. Projections of the potential permanent<sup>20</sup> employment levels in the Downtown study area that could result from each of the alternatives show a significant increase over current levels. Even the Low Intensity Alternative could create nearly 1,700 new jobs or an increase of 22 percent over the existing 7,800 Downtown area jobs. This potential for a minimum of nearly one fourth more employees in the Downtown than presently work there is inherent in the third goal of the plan which aims to "diversify, revitalize and promote the downtown economy". In this way, increased total employment is a potential impact common to all of the alternatives.

Construction period employment would also be enhanced by new construction and renovation of existing buildings as allowed under each of the four alternatives. Public improvements included in most of the alternatives would also generate construction jobs.

---

<sup>20</sup> Employment projections are presented for two time periods: construction and permanent. The term permanent does not imply stability or an absence of labor market dynamics, but rather is meant to differentiate the short-term construction jobs from long-term jobs.

The new permanent jobs and, to a lesser extent, the construction jobs, would lead to a "multiplier effect" by generating demand for additional goods and services in the regional economy, some of which would be captured by Downtown Berkeley. However, this effect on businesses within the study area, or within greater Berkeley for that matter, is complicated by the fact that the *Plan* as defined in Chapter III includes additional development or renovation of retail uses, which could serve as a conduit for this additional economic activity. Because the scope of this EIR does not include analysis of the market for land uses proposed

*Population.* Other than Alternative 1, which does not assume any incentives for or the production of significant new amounts of housing, all alternatives could result in increased population levels through construction of new housing. The levels of new population would vary greatly among the two *Plan*-based alternatives and the Low Intensity Alternative, due to the assumptions about the use of development bonuses and the relative attractiveness of residential development under different parking requirements.

*Childcare.* Each of the four alternatives would generate additional demand for childcare services, generally in direct proportion to the employment-generating potential of each alternative.

*Housing.* Over 250 units of new housing could be provided under any of the alternatives (except the No Action Alternative). As with job generation resulting from commercial growth or renovations, the *Plan* intends to in-fill existing developable sites in the Downtown and provides incentives under Alternatives 2, 3 and 4 to do so. Though not surveyed as part of this EIR, the 24 sites with additional development potential are thought to include less than half a dozen residences which could be removed from the housing stock in the event of renovation or redevelopment of the particular parcel(s).

#### Impacts Specific to No Action Alternative.

*Employment.* Nearly 4,300 new jobs could be created in the study area under this alternative. Over 88 percent (3,768) would be office jobs and the remaining 12 percent (522) would be divided evenly between eating and drinking establishments and other retail outlets.

Based on analysis of data on occupational breakdowns within these industries, it is possible to project how new jobs in the Downtown would be allocated among occupations. Net new jobs provided by development allowed under this alternative would be distributed by occupational categories as shown in Table 9.

Table 9

Projection of Downtown Employment by  
Occupation and Industry:  
No Action Alternative

	<u>Office Jobs</u>	<u>Retail Jobs</u>	<u>Eating/Drinking Establishment Jobs</u>	<u>Occupational Total</u>
Prof./Tech./Mgr. <sup>a</sup>	1,319	34	18	1,371
Sales	490	141	16	646
Clerical	1,281	31	5	1,318
Service	264	16	217	496
Production	<u>414</u>	<u>39</u>	<u>5</u>	<u>459</u>
Total	3,768	261	261	4,290

<sup>a</sup>Combined category of professional, technical and managerial occupations

Source: Mundie & Associates using occupation by industry estimates for Berkeley prepared by the Office of Economic Development.

*Population and Housing.* For the purposes of this analysis, it is assumed that the absence of new housing construction in the Downtown study area will continue into the future. While it is possible that a small number of units may be constructed, their impact would not be significant when compared to the numbers allowed under the other three alternatives.

Based on the existing relationship between overall employment in Berkeley and housing demand, it would be reasonable to project that the nearly 4,300 new jobs in Downtown Berkeley under this alternative would lead to an aggregate increase in housing demand of 583 units in the City.

Relying on the simplifying assumption that no significant increase in Downtown housing would result from this alternative, the increase in housing demand brought about by job growth downtown is not offset by any increase in supply. The OED housing mitigation program would of course apply to specific proposals for new development in the Downtown.

Using the ten-step series of calculations presented above (pp. 67-68), the impact on low- and very-low income households can be calculated. Were this alternative a specific development proposal, it would result in measurable housing impacts on a total of 272 low- and very low income households. Applying the City's estimated per-household mitigation subsidy would result in a total level of mitigation payments exceeding \$10.1 million.

*Childcare.* New employment in the Downtown under this alternative would increase the need for childcare services in Berkeley by a total of approximately 417 positions, 195 of which would represent low or very low income households.



### Impacts Specific to Downtown Plan - Base Alternative.

**Employment.** Approximately 3,300 new jobs would be generated by this alternative. The shift in land use emphasis of the *Plan* from offices toward retail is illustrated by the higher proportion of positions in the retail sector (1,092 jobs or 33 percent of the total) when compared with the No Action Alternative. However, office-related jobs still comprise the majority of all new jobs (2,214 or 67 percent). The new housing projected under this alternative would generate a portion of these jobs, mainly service jobs such as building maintenance, landscaping services and leasing.<sup>21</sup>

Net new jobs provided by development allowed under this alternative would be distributed by occupational categories as shown below.

Table 10

Projection of Downtown Employment by  
Occupation and Industry:  
**Downtown Plan - Base Alternative**

	<u>Office Jobs</u>	<u>Retail Jobs</u>	<u>Eating/Drinking Establishment Jobs</u>	<u>Occupational Total</u>
Prof./Tech./Mgr. <sup>a</sup>	775	88	29	892
Sales	288	367	25	679
Clerical	753	82	8	843
Service	155	41	342	354
Production	<u>244</u>	<u>102</u>	<u>8</u>	<u>354</u>
Total	2,214	680	412	3,305

<sup>a</sup>Combined category of professional, technical and managerial occupations

Source: Mundie & Associates using occupation by industry estimates for Berkeley prepared by the Office of Economic Development.

**Population and Housing.** On the basis of the assumptions outlined in Table 1 and the resulting quantitative description presented in Table 4, this alternative would allow for the construction of about 268 housing units. Assuming an average of 2.0 persons per new household, the Downtown residential population would grow by 536, or 61 percent.

The increased employment generated by growth allowed or encouraged by the *Downtown Plan* will also lead to increased demand for housing, and not necessarily within the Downtown. Using the methodology developed in collaboration with the City's OED, the implications for citywide housing demand arising out of the in-migration of new employees to fill some of the retail and office positions have been estimated.

<sup>21</sup> Office of Economic Development and Planning and Community Development Department, *Downtown Plan Working Document - Economic Information*, September 1988.

Assuming that about one out of five of the new office and retail employees would seek housing within the City of Berkeley, the effect of this alternative would be to create an increase in housing demand of 449 units over the course of the *Plan's* implementation. Compared with the addition of 268 units as part of the *Plan*, the net effect in units would be a 181 unit shortfall. Were this alternative a specific development proposal, it would result in housing impacts on a total of 217 low- and very low income households. Applying the City's estimated per-household mitigation subsidy would result in a total level of mitigation payments exceeding \$8.1 million.

*Childcare.* New employment in the Downtown under this alternative would increase the need for childcare services in Berkeley by a total of approximately 321 positions, 156 of which would represent low or very low income households.

Impacts Specific to Downtown Plan - Maximum Alternative.

*Employment.* The maximum utilization of bonuses allowed by the *Plan* could lead to a level of total new employment (about 4,150 positions) that is nearly as great as could occur under the No Action Alternative (nearly 4,300). The distribution between types of jobs shows the strong retail emphasis of this alternative. The two retail use categories would create a total of 2,492 jobs (60 percent), followed by office uses with 1,656 (40 percent).

Net new jobs provided by development allowed under this alternative would be distributed by occupational categories as shown below.

Table 11

Projection of Downtown Employment by  
Occupation and Industry:  
**Downtown Plan - Maximum Alternative**

	<u>Office Jobs</u>	<u>Retail Jobs</u>	<u>Eating/Drinking Establishment Jobs</u>	<u>Occupational Total</u>
Prof./Tech./Mgr. <sup>a</sup>	580	223	54	857
Sales	215	925	47	1,187
Clerical	563	206	16	784
Service	116	103	646	865
Production	<u>182</u>	<u>257</u>	<u>16</u>	<u>455</u>
Total	1,656	1,713	779	4,147

<sup>a</sup>Combined category of professional, technical and managerial occupations

Source: Mundie & Associates using occupation by industry estimates for Berkeley prepared by the Office of Economic Development.

*Population and Housing.* The maximum additional housing which would result from utilization of the *Plan's* bonuses would be 934 units. Population associated with these units would reach approximately 1,868, or a 112 percent increase over the existing base.

If the 4,147 net new employees projected under this alternative development scenario affected housing demand in Berkeley as described above for the Base Alternative, they would require approximately 563 units throughout the city. Compared with the 934 units which could be added as part of the *Plan*, the net effect in units would be a 371 unit increase. Were this alternative a specific development proposal, it would result in housing impacts on a total of 284 low- and very low income households. Applying the per-household mitigation subsidy would result in a total level of mitigation payments exceeding \$10.7 million.

*Childcare.* New employment in the Downtown under this alternative would increase the need for childcare services in Berkeley by a total of approximately 403 positions, 203 of which would represent low- or very-low income households.

#### Impacts Specific to Low Intensity Alternative.

*Employment.* Total employment generation under this alternative would be less than 40 percent of either the No Action or Downtown Plan - Maximum Alternative and roughly half of the Downtown Plan - Base Alternative. The projected 1,695 jobs would include 999 office-related positions (59 percent) and 696 (41 percent) in retail outlets including housing services, general retail outlets and restaurants.

Net new jobs provided by development allowed under this alternative would be distributed by occupational categories as shown below.

Table 12

#### Projection of Downtown Employment by Occupation and Industry: Low Intensity Alternative

	<u>Office Jobs</u>	<u>Retail Jobs</u>	<u>Eating/Drinking Establishment Jobs</u>	<u>Occupational Total</u>
Prof./Tech./Mgr. <sup>a</sup>	350	81	9	440
Sales	130	338	38	506
Clerical	340	76	8	423
Service	70	38	4	112
Production	<u>110</u>	<u>94</u>	<u>10</u>	<u>214</u>
Total	999	627	69	1,695

<sup>a</sup>Combined category of professional, technical and managerial occupations

Source: Mundie & Associates using occupation by industry estimates for Berkeley prepared by the Office of Economic Development.

*Population and Housing.* The additional housing which would result from this alternative's more restrictive height and FAR limits on all development and absence of incentives for residential development would be 696 units. New Downtown residents living in these units would reach approximately 1,392.

If the 1,695 new employees projected under this alternative affected housing demand in Berkeley as described above for other alternatives, they would require approximately 230 units throughout the city. Compared with the 696 units which could be added as part of the *Plan*, the net effect in units would be a 466 unit increase.



*Childcare.* New employment in the Downtown under this alternative would increase the need for childcare services in Berkeley by a total of approximately 165 positions, 81 of which would represent low- or very-low income households.

Table 13

Overview of Net Socioeconomic Impacts

	<u>No Action Alt.</u>	<u>Downtown Plan - Base Alt.</u>	<u>Downtown Plan - Maximum Alt.</u>	<u>Low Intensity Alt.</u>
Employment				
Retail	522	1,091	2,491	696
Office	3,768	2,214	1,656	999
Total	4,290	3,305	4,147	1,695
Downtown Population	0	536	1,868	1,392
Effect on Downtown Housing Supply	0	+ 268	+ 934	+ 696
Effect on Citywide Housing Demand	- 583	- 449	- 563	- 230
Net Citywide Housing Impact	- 583	- 181	+ 371	+ 466
Low- and Very-Low Income Households Requiring Subsidy	- 272	- 217	- 284	- 112
Approximate Total of Housing Mitigation Payments (\$ million)	\$10.1	\$ 8.1	\$10.7	\$ 4.2

Source: Mundie & Associates

**Public Improvements or Program Mitigation Measures Included in the Plan**

The *Plan* includes at least six program measures that would have the effect of mitigating potential socioeconomic impacts of development allowed or encouraged under its auspices. Each is listed and summarized below in the order of its appearance (with parenthetical page references) in the *Plan*.

Establish a Schedule for Payment of Housing Mitigation Fees and Provide Incentives or Requirements that the Funds be Spent Downtown or Within One-Half Mile (p. 34). Increases in citywide demand for housing in that segment of the housing market serving low- and very-low income households resulting from specific projects in the Downtown would be mitigated through the implementation of this program. The fee schedule for this program would require (after the quantified impact has been calculated on the basis of the City's program) the payment of \$45,263 per housing unit for each very-low income household and \$24,225 per housing unit for each low income household.

Concentrating the expenditure of program funds in the Downtown or within a specified distance of the Downtown study area could bolster the *Plan's* goal of increased housing and related activity Downtown.

First Source Hiring Program (p. 60). The potential for new development to displace existing businesses or to change the composition of available jobs in the Downtown study area would be mitigated by this existing program which requires that all developers coordinate construction and permanent employment through a city program director who refers potential employees to the employer. The new business would not be required to hire from the City-provided pool but must supply the City with an explanation in the case that an applicant is determined to be unsuitable.

Develop Mitigation Fee Program to Offset Impacts on Housing, Transportation, Child Care and Public Services (p. 60). While the housing component of this proposal was noted above, its placement here is part of a more broad recommendation that the City implement a comprehensive approach to calculating appropriate mitigation measures for the impacts of development in other areas as well. In the case of recent development proposals, analysis of appropriate mitigation fees has been handled on a case by case basis. This program suggests a more structured or predictable approach,

The underlying framework for such a comprehensive program is currently being prepared by the City's Office of Economic Development.

Prepare an Analysis and Develop Programs to Insure That Incubator Space is Provided Downtown (p. 60). Two of the *Plan's* major goals include the themes of expressing the uniqueness and diversity of Downtown Berkeley while at the same time revitalizing and promoting its economy. This program suggests a way to maintain this delicate balance, by encouraging startup businesses which might otherwise have a difficult time locating rental space. However, because decisions in the private real estate market are carried out by a multitude of independent participants, implementation of such a refined form of land use regulation may prove a challenge. The details of this program have yet to be worked out.

#### Additional Mitigation Measures Recommended by this EIR

Remaining Impact 1: Potential for Increased Pressure on Local Housing Market [Ø]

Mitigation Measure: Persons residing or seeking to reside in Berkeley whose income levels exclude them from participating in housing programs for low- and very-low income households could be partially protected from the adverse effects of increased pressure on the local housing market if the City were to implement a phasing plan in which Downtown housing development is linked with commercial development.

## URBAN DESIGN AND VISUAL QUALITY

### Introduction

This section of the EIR focuses on downtown urban design characteristics, historic structures, important view corridors and the pedestrian environment. Views of downtown Berkeley are documented in a series of black and white photographs which accompany this section. The photographs are also used to demonstrate how future development in downtown Berkeley may impact the study area's existing visual quality. Graphic exhibits also accompany the text to identify varying building heights, parking facilities, open space, historic structures, and major view corridors.

### Existing Setting

Urban Design and Historic Structures. As stated in Chapter III of the EIR, Berkeley Downtown development began in the 1870's, followed by intensive development just after 1900 and during the 1920's and 1930's. Small increments of development have occurred in recent years, accompanied by remodeling of existing structures.

Much of the historic scale of the Downtown has been retained, with a number of buildings currently designated as Landmark Buildings. Of the 186 buildings in the Downtown, 74 have been included in the State historic resource inventory; 26 are designated City Landmarks, and 8 are on the National Register of Historic Places.<sup>22</sup>

All of the Landmark Buildings located within the study area date from the turn of the century and the 1920's and 1930's. Figure 10 shows the location of Landmark Buildings, Significant Structures (as defined by the Berkeley Architectural Heritage Association [BAHA]), and Contributing Structures (as defined by BAHA). These buildings are identified by name in Table 14. As can be seen in Figure 10, Shattuck Avenue includes a significant number of Landmark Buildings.

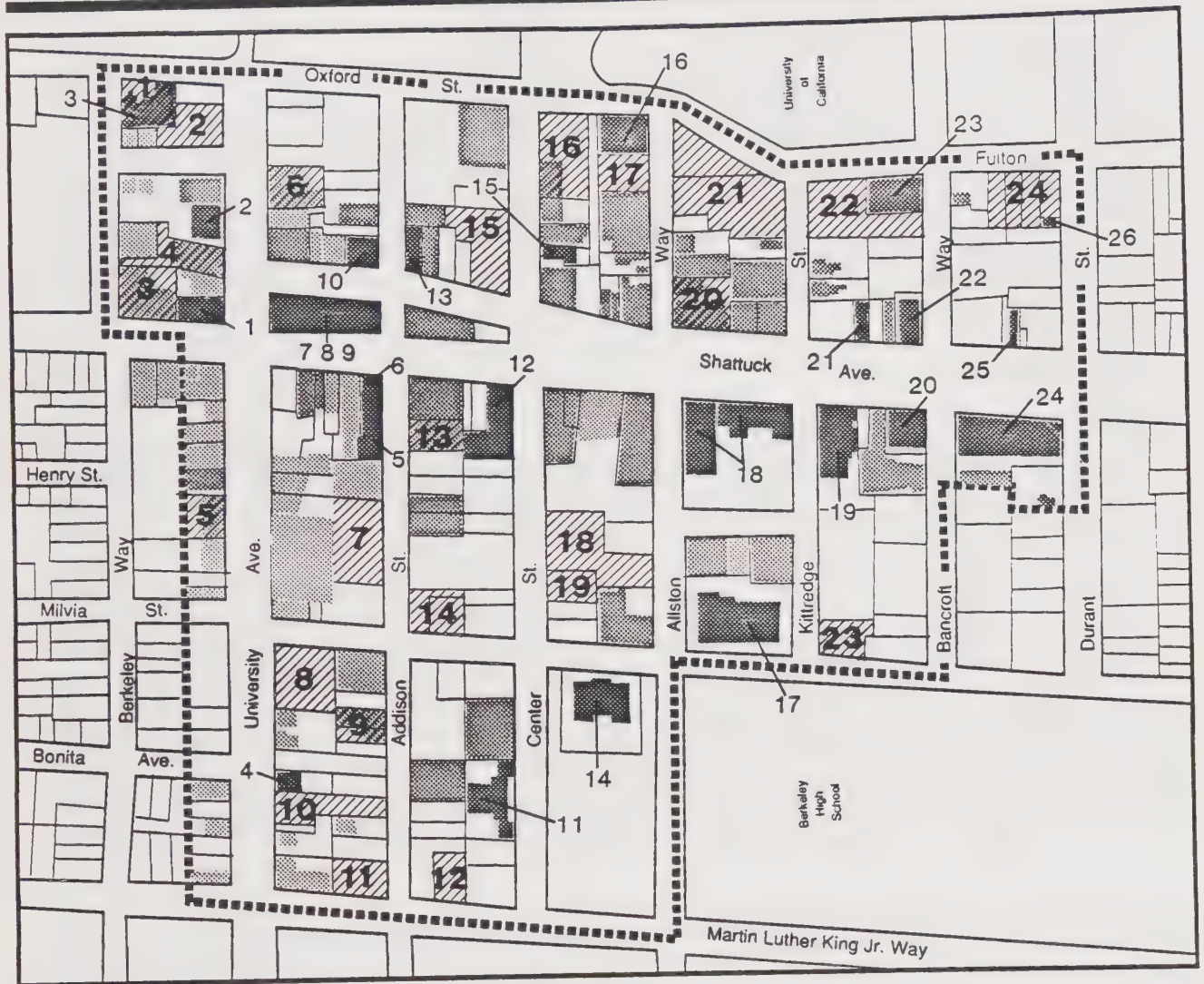
Chapter 3.24 of the City of Berkeley Zoning Ordinance identifies the responsibilities of the City's Landmarks Preservation Commission and the procedures that must be followed regarding designated landmarks, historic districts and structures of merit. The Landmarks Preservation Commission reviews all permit applications for any construction, alteration or demolition on a landmark site, in an historic district or on a structure of merit. (Copies of Chapter 3.24 are available from the Community Development Department).

Downtown structures built between 1900 and 1910 often combined ground floor shops with upper story offices or hotel space. Several buildings (numbered 2, 4, 5, 10, 15, 16, 17, 18, 20 and 22 in Figure 10 and in Table 14 are from this period. Details representative of the Neo-Classical elements of the City Beautiful movement are evident in these buildings: cornices, classic pillars, arches, and stone or terra cotta ornamentations around the entries. The Mission Revival architectural style was also popular during this period. This style includes tile roofs, balconies and square corner bays. Figures 11 and 12 show examples of these architectural styles.

---

<sup>22</sup> Berkeley Architectural Heritage Association (BAHA), 1987, Historic Survey of Downtown, Section IIIa.





Landmark Building - City and/or Nat'l Register



Significant Structure (BAHA)



Contributing Structure (BAHA)

Source - BAHA Historic Survey



Number Corresponds to Number in Table Listing Landmark Buildings



Number Corresponds with Identified Development Sites



**Figure 10**  
**Historic Structures**

Berkeley Downtown Plan EIR

Table 14

## Downtown Berkeley Landmark Buildings

<u>Map No.</u>	<u>Address</u>	<u>Name</u>	<u>Year Built</u>	<u>Architect</u>
1	1987 Shattuck Ave.	U.S. Realty/Snoopy's	1925	Earle Bertz
2	2131 University Ave.	Acheson Physicians Bldg.	1908	George L. Mohr
3	1952 Oxford St.	Univ. Garage/Richfield	1930	Walter H. Ratcliff
4	1940 University Ave.	Bonita Apts./Univ. Walk	1905	George L. Mohr
5	2071 Addison St.	Golden Sheaf Bakery	1905	Clinton Day
6	2036 Shattuck Ave.	S.H. Kress/Newberry's	1933	Edward F. Sibbert
7	82 Shattuck Square	Copymat/Upstart Crow	1926	Miller & Pflueger
8	64 Shattuck Square	Roos Bros.	1926	Miller & Pflueger
9	48 Shattuck Square	Birdie's/Pasta Place	1926	Miller & Pflueger
10	2037 Shattuck Ave.	Studio Building	1905	F.H. Dakin/W.H. Weeks
11	1930 Center St.	Veteran's Memorial	1928	Henry H. Meyers
12	2081 Center St.	Wells Fargo Bldg.	1925	Walter H. Ratcliff
13	2104 Addison St.	Mason-McDuffie/Mobilia	1938	Walter H. Ratcliff
14	2180 Milvia St.	Farm Credit/City Hall	1938	James W. Plachek
15	2124 Center St.	Mikkelsen & Berry Bldg.	1902	Stone & Smith
16	2171 Allston Way	Such Bldg./Oxford Hall	1906	George L. Mohr
17	2000 Allston Way	U.S. Post Office	1914	Oscar Wenderoth
18	2060 Allston Way	Shattuck Hotel/Hink's	1909	B.G. McDougall
19	2090 Kittredge St.	Berkeley Public Library	1930	James W. Plachek
20	2276 Shattuck Ave.	Donogh Bldg./Pasand	1905	Charles W. Dickey
21	2271 Shattuck Ave.	Metropol/Tupper & Reed	1925	William R. Yellan
22	2105 Bancroft Way	Masonic Temple/Conf. Ctr.	1905	William H. Wharff
23	2288 Fulton St.	Odd Fellows Temple	1926	James W. Plachek
24	2300 Shattuck Ave.	Corder Bldg./Shattuck Ap.	1925	James W. Plachek
25	2323 Shattuck Ave.	Fidelity S&L/Citicorp	1926	W. Ratcliff/M. Goodman
26	2125 Durant Ave.	Bishop Studio	1939	Carl Fox

Source: Berkeley Architectural Heritage Association, History Survey of Downtown, 1987



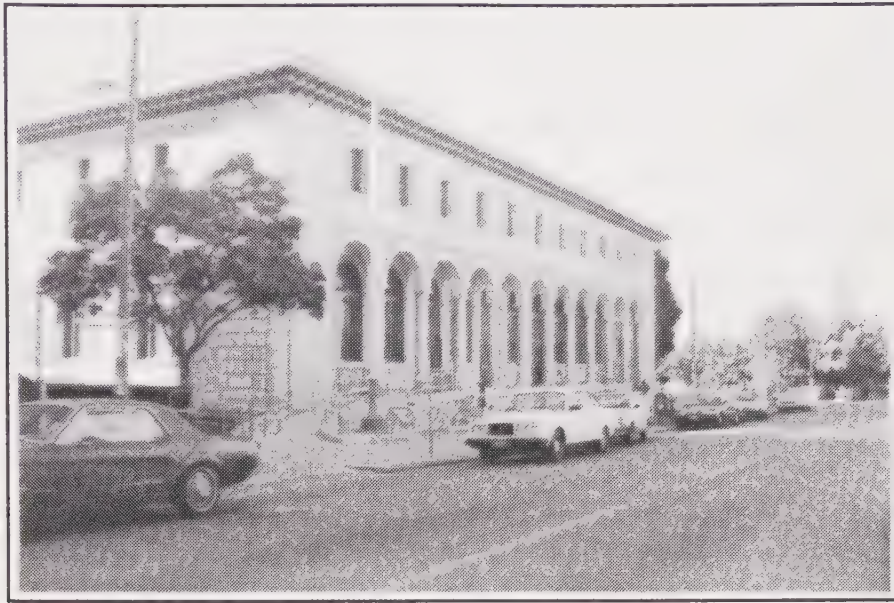


[a] The Acheson Physicians Building (2131 University Avenue) has a cornice which combines Neo-Classical motifs.



[b] The Bonita Apartments Building (1940-42 University Avenue) incorporates Mission Revival elements in the two square corner towers.





[a] The U.S. Post Office Building on the corner of Allston Way and Milvia Street provides an example of Neo-Classical architecture.



[b] The S.H. Kress and Co. Building on the corner of Shattuck Avenue and Addison Street is an example of a Deco Building. Medallions in an Aztec motif top the windows which are put to ornamental use as pillars.

During the 1920's and 1930's, buildings of the Neo-Classical as well as Period Revival and the new Art Deco style were constructed. A number of new buildings were constructed on Shattuck Square which was converted in 1923 from the Southern Pacific Railroad terminus into a commercial block. Buildings representative of the period include those numbered 1, 3, 6, 7, 8, 9, 11, 12, 13, 14, 19, 21, 23, 24, 25 and 26 which are mapped on Figure 10 and listed in Table 14. Figure 12[b] shows the S. H. Kress & Company building which is an example of the Art Deco style.

Examples of newer structures in the Downtown (built after 1940) include the following:

- ☐ Berkeley Tower (2120 University Avenue)
- ☐ Golden Bear Building (1995 University Avenue)
- ☐ 2197-2199 Shattuck Avenue
- ☐ Merrill-Lynch Building (2001 Addison Street)
- ☐ Great Western Building (2150 Shattuck Avenue)
- ☐ ELS Building (2030 Addison)
- ☐ Teknekron Building (2001 Center Street)

Photographs of some of these buildings can be seen in Figure 13.

The majority of buildings within the Downtown are between one and three stories, as shown in Figure 14. Most of the buildings between four and six stories in height are located south of Addison Street, interspersed among lower buildings. Only six buildings exceed six stories, two of which are 12 stories in height. The two tallest buildings within Downtown Berkeley are the Wells Fargo Building and the Great Western Building which are located on the west side of Shattuck Avenue at its intersection with Center Street (see Figure 14). These two structures create a strong focal point for Downtown Berkeley, especially from distant uphill locations.

Many of the Downtown buildings front directly on the streets without setbacks, creating an urban wall of stucco, concrete or brick facades when viewed from the street or sidewalk. Depending upon the particular architectural style and site plan, elements of pedestrian scale and interest may or may not be present. Such elements include awnings, cornice lines, architectural detailing around windows and doors, street trees and landscaping adjacent to the sidewalks.

View Corridors. Six important view corridors are identified below that characterize the existing visual quality and urban design setting in the Downtown. The location of these corridors is shown in Figure 15. The corridors deemed to be critical and shown below cover a great deal of the Downtown. The east/west ones are of importance because of their slope (and the view topography allows) and the north/south ones matter because of their width. Photographs of view corridors (Figures 16 to 18) concentrate on those locations within the study area with the widest view - which, in general, are locations currently occupied by vacant and under-utilized lots. These are the areas within Downtown Berkeley likely to experience the greatest visual impact due to future development.

University Avenue Corridor. University Avenue, the principle north-south corridor and a main gateway to the Downtown area, slopes gently uphill to its terminus at Oxford Street. The four traffic lanes, median strip, broad sidewalks and low buildings along University Avenue create a wide view corridor with open views to the east and west. Most of the structures lining the corridor are less than four stories in height. The tallest buildings (Wells Fargo and Great Western), located at the eastern end of the corridor between Oxford Street and Shattuck Avenue, are seven stories (see Figure 14). These two buildings form a strong contrast with the lower buildings which line the corridor within the Downtown.



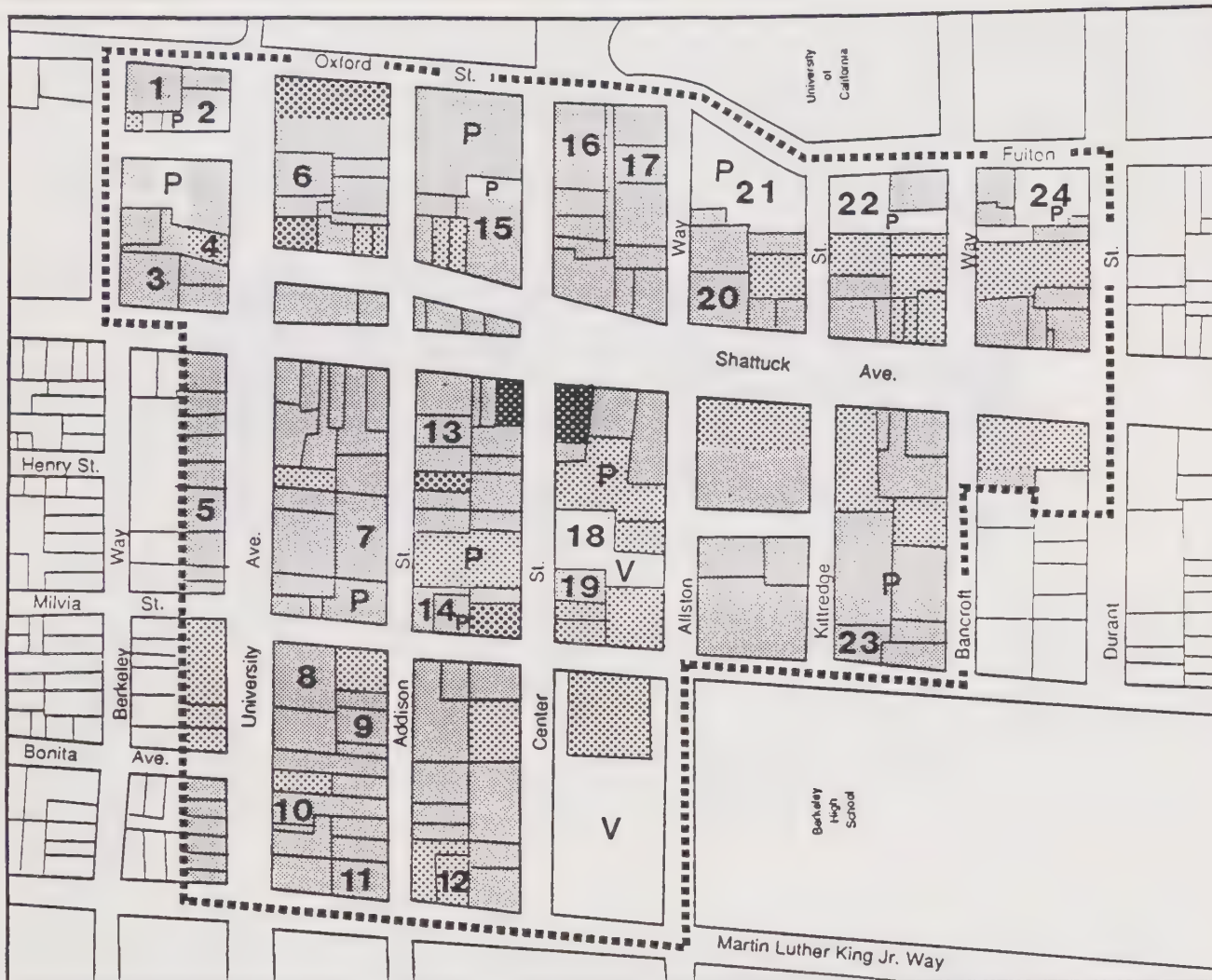


[a] The Golden Bear Building (1995 University Avenue) is highly visible from Milvia Street, across the undeveloped corner lot in the foreground.

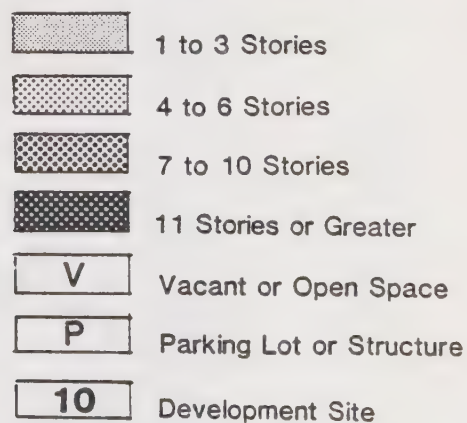


[b] The Merrill-Lynch Building (2001 Addison Street) shows a variety of detailing at the entrance. Low-rise structures in the background allow views of the Berkeley Hills.

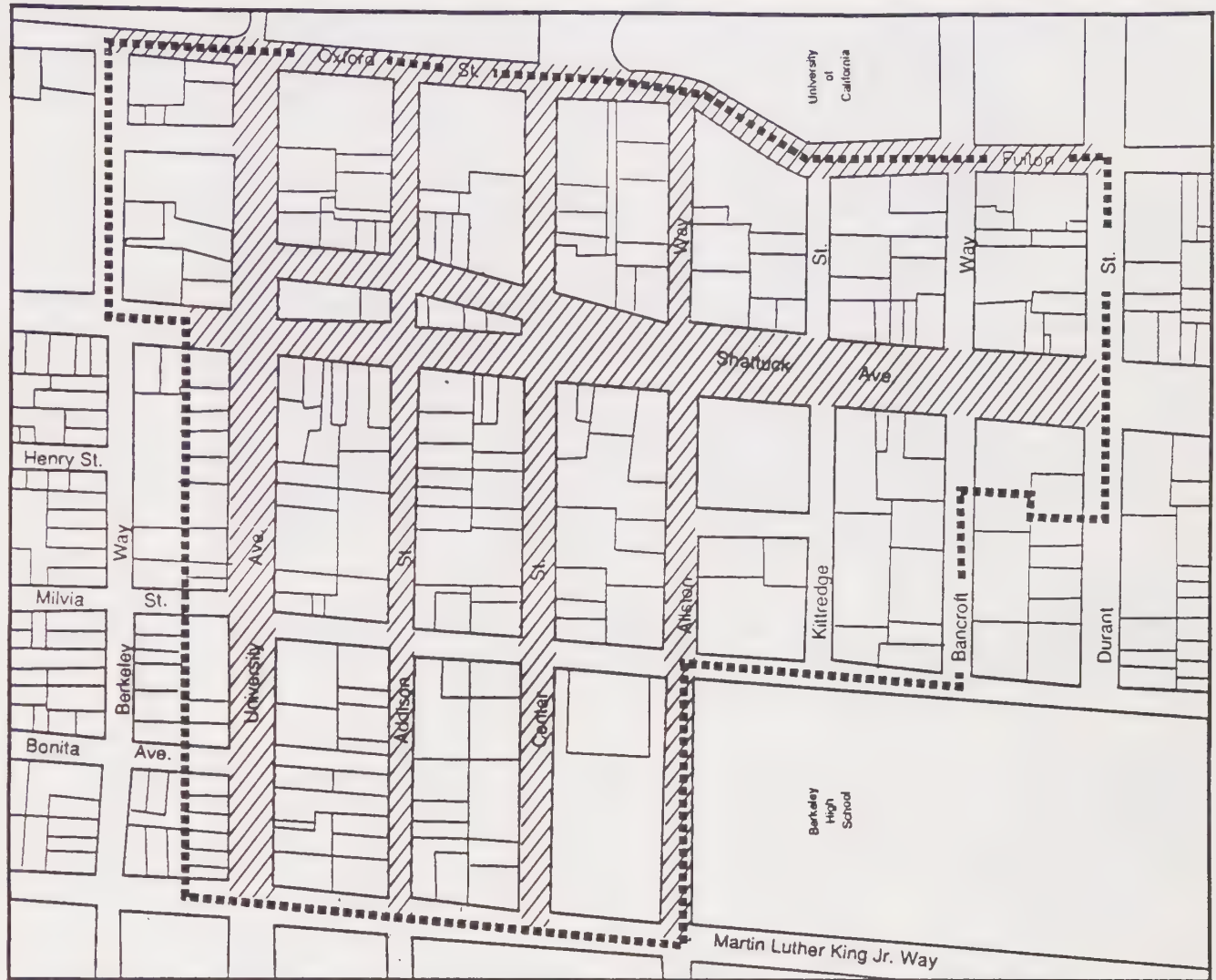




Source: Engineering Science



**Figure 14**  
**Building Height Inventory, June 1988**



View Corridor Locations



**Figure 15**  
**Major View Corridors**



Several potential development sites and historic landmark buildings are clustered at the eastern end of the corridor around the University Avenue/Shattuck Avenue intersection (see Figure 10). Landmark buildings include the Acheson Physicians Building (1908), the Napa Valley Grill (US Realty/Snoopy's) (1925) and the Copymat/Upstart Crow (1926) Building.

At the eastern end of University Avenue, one can look west towards the San Francisco Bay. On a clear day, the Marin Headlands are visible in the distance, with this view framed by University Avenue buildings. During late afternoon in early and late summer months, sunsets form a strong visual element within this view corridor. The Tulip trees (*Liriodendron tulipifera*) which line University Avenue create a pedestrian-scale, natural foreground element for building facades (see Figure 16[a]). The median strip for this portion of University Avenue includes either brick paving (see Figure 16[a]) or grass.

From the western end of Downtown, one can look east along University Avenue towards the University of California campus and the Berkeley Hills in the background (see Figure 16[b]). The midground of this view includes the Bonita Apartments (University Walk) Building (1905) with its distinctive Mission Revival-style architecture with two square towers.

**Addison Street Corridor.** The Addison Street view corridor is defined by a relatively narrow street with varied building heights and intermittent trees which line the sidewalks. Looking east along the corridor, one can see the Berkeley Hills in the background (see Figure 17[a]). Most of the buildings along Addison Street are between one and three stories high (see Figure 14). The tallest building (2030 Addison Street) is seven stories tall.

Looking east from the intersection of Milvia Street and Addison Street, the 2030 Addison Street building is the background to a public four-story parking structure. This view also includes the top portions of the Great Western and Wells Fargo Buildings which are one block south. The absence of street trees along the south side of Addison Street results in a "stark" urban street image, as can be seen in Figure 17[b]. Clear, narrow sightlines directly east or west along the view corridor provide distant views of either the Berkeley Hills or the San Francisco Bay.

Several historic buildings are clustered at the Shattuck Avenue and Addison Street intersection, located in the core of Downtown Berkeley. Landmark buildings near this intersection include the S.H. Kress/Newberry's Building (1933), the Golden Sheaf Bakery Building (1905), Birdie's/Pasta Place (1926), the Studio Building (1905), and the Mason-McDuffie/Mobilia building (1928).

The Addison Street corridor has a number a parcels that have been identified as underdeveloped and potential areas for new development as part of the *Plan*. All of these are located west of Shattuck Avenue and east of Martin Luther King Jr. Way (see Figure 10).

*Center Street Corridor.* The Center Street view corridor is characterized by its mixture of modern and historic buildings (see Figure 10), widely divergent building heights (see Figure 14), and relatively wide street and sidewalks. The most striking visual elements within this corridor are the Wells Fargo Building (1925) and the modern Great Western Building, which parallel Shattuck Avenue at its intersection with Center Street (see Figure 18[a] and 18[b]).



Figure 16: University Avenue View Corridor



[a] East-west view down University Avenue is framed by large buildings on either side of the street. The San Francisco Bay and Marin Headlands are visible on a clear day. Note the Acheson Physician Building (1908) on the right in the midground.



[b] The Berkeley Hills define the eastern horizon of this view. The distinctive form of the Bonita Apartments (1905) is clearly seen against the skyline.



[a] Looking east from the Martin Luther King Way and Addison Street intersection, the two- to three-story buildings focus one's view upon the Berkeley Hills in the distance.



[b] Looking east from the Addison Street/Milvia Street intersection, the Wells Fargo and Great Western Buildings dominate the skyline and background views. The one-story foreground structure is a potential future development site.





[a] The Great Western Building (left) and the Wells Fargo Building (right) dominate the skyline views to the San Francisco Bay seen on clear days in this view, looking west, from Oxford Street at its intersection with Center Street.



[b] Looking east between the Wells Fargo Building and the Great Western Building, one has a clear view of the Berkeley Hills. The Teknekron Building is visible in the left foreground of this view.



Looking west from Oxford Street, these two buildings form a gateway that frames the view along Center Street towards the San Francisco Bay. The predominantly one- and two-story structures in the foreground emphasize the width of Center Street and lead one's view towards the 12-story buildings in the background (see Figure 18[a]). The absence of street trees in this view result in a visual effect featuring strong horizontal and vertical lines.

One can easily see the Berkeley Hills at the eastern terminus of this view corridor. As can be seen in Figure 18[b], the Berkeley Hills provide a strong focal point for this view, as a backdrop to trees of the U.C. Berkeley campus.

Allston Way Corridor. Also oriented in the east-west direction, the edges of the central portion of the Allston Way Corridor are defined by a number of structures which are between four and six stories in height (see Figure 14). These include City Hall, the YMCA Building and the Shattuck Hotel. The remaining portion of this view corridor includes buildings which are less than three stories. Martin Luther King Jr. Park, a City park, takes up a major portion of the western end of the Allston Way view corridor (see Figure 1).

From Oxford Street, one looks west along Allston Way towards the San Francisco Bay. This portion of the view corridor is framed by numerous street trees which screen many one and two-story structures from view (see Figure 19 [a]).

From Shattuck Avenue, one looks east along Allston Way towards the Berkeley Hills which are framed by both street trees and buildings along the corridor (see Figure 19 [b]).

Shattuck Avenue Corridor. The Shattuck Avenue view corridor is the most significant north-south corridor passing through downtown Berkeley. The following is an excerpt from the Draft Plan:

For many people who travel through and to Berkeley, the image of Shattuck Avenue provides an introduction to the City and the Downtown. Historically, Shattuck Avenue is the heart of Downtown commercial activity, especially retailing. . . . The elements that give Shattuck Avenue its distinct characteristics in the Downtown are the scale of buildings along both sides, the continuous building frontages that form a streetwall, and its historical and current role as a major transportation artery for a variety of modes, giving the street high visibility and bringing thousands of people to the Downtown each day. Architectural and land use characteristics of Shattuck Avenue include continuous retail store frontages, faced with natural or pressed brick, concrete, or stucco, stone (marble, granite) tile, or terra cotta; a pattern of fifteen to thirty foot frontages, giving the street a sense of scale and detail that helps to generate a high level of pedestrian activity and interest; and historic recessed entrances, detailed with special paving and ornate display windows.<sup>23</sup>

Shattuck Avenue's broad sidewalks, pedestrian bays, median islands, parking bays, dedicated left-turn lanes and four lanes of traffic make this the widest corridor within the study area. Open views of the sky dominate one's view along this corridor, aided by the street width and the generally uniform building height which is for the most part less than three stories (see Figure 14).

---

<sup>23</sup> City of Berkeley, *Downtown Plan (Draft)*. February 1988.



[a] Aside from the Great Western Building, low structures and street trees define the horizon from a vantage point at Oxford Street and Allston Way. The parking lot (left) and a vacant lot (right) are potential development sites.



[b] The structures in this view are approximately 35 feet high. Views of the east reveal the Berkeley Hills.



Figure 20 [a] shows a view looking south from Shattuck Avenue and Berkeley Way, one block north of University Avenue. This view shows an important gateway to the Downtown area. While the taller buildings (Great Western and Wells Fargo Bank) dominate the skyline, the lower one to three story structures create a distinctive low intensity urban setting. The view from the opposite direction (see Figure 20 [b]), looking north from Durant Street and Shattuck Avenue towards the Great Western Building, includes a number of diverse elements such as street trees, historic structures, wide areas of street paving, and prominent light poles. In the far distance, the El Cerrito/Berkeley Hills are visible at the end of the view corridor. The street trees planted in the Shattuck Avenue median break up the wide view corridor and provide a strong contrast to the vertical and horizontal building and pavement lines.

Street trees (*Pittosporum undulatum*) line the east and west sidewalks along all of Shattuck Avenue in Downtown Berkeley, providing a continuous visual buffer between the street and the buildings.

Parking bays along Shattuck Avenue provide a visual and physical barrier between the pedestrian and the traffic lanes. The pedestrian's view along Shattuck Avenue is generally drawn to the immediate surroundings due to the combination of numerous ground floor retail windows and the continuous row of street trees. These trees tend to limit views of the sky and the distant horizon.

*Oxford/Fulton Street Corridor.* The Oxford/Fulton Street view corridor is a second major north-south view corridor in Downtown Berkeley. It separates the Downtown from the U.C. Berkeley campus. Landscaping along the western edge of the U.C. campus creates a strong visual contrast to the building edges along the west side of Oxford Street.

Unlike many of the view corridors in Downtown Berkeley, the Oxford/Fulton corridor is not completely straight in a north-south orientation due to the road curvature at the intersections of Oxford Street with Allston Way and Kittredge Street. This road curvature creates a terminus for one's view south along Oxford Street as shown in Figure 21 [a] which illustrates the view south from Oxford Street (at Addison Street). The U.C. Extension Building is barely visible at the end of the view corridor (behind median-strip trees) where the road curves to the right.

The view north along Oxford Street from this same location (see Figure 21 [b]) is dominated by the seven-story U.C. Systemwide Building which is located at the corner of University Avenue and Oxford Street. The large bulk of this building dwarfs the nearby street trees and contrasts significantly with the landscaping at the edge of the U.C. campus. One can view the Berkeley Hills in the distant background of this view corridor.

*External Views of Downtown Berkeley.* The topography of Berkeley allows views down onto the Downtown from both distant and nearby locations to the east.

Two photographs from the Berkeley Hills illustrate the visual relationship of Downtown Berkeley to the overall urban setting between San Francisco Bay and the Berkeley Hills. Figures 22 [a] and 22 [b] show views from the Berkeley Hills, taken from the Lawrence Hall of Science and Cragmont Park. These views show that existing structures within the study area generally blend in with the surrounding urban landscape. The 12-story Wells Fargo Building and Great Western Building provide a reference point for Downtown Berkeley from these distant locations. The San Francisco Bay visually links the East Bay urban setting and the hills of San Francisco in the distance.





[a] Looking south from Berkeley Way and Shattuck Avenue, one notices the great difference between high-rise and one- and two-story buildings in the downtown area.



[b] A view from Shattuck Avenue at Durant Street shows a variety of building heights. The El Cerrito/Berkeley Hills are visible to the north.



[a] Looking south along Oxford Street from its intersection with Addison Street, the thick tree cover on the U.C. Berkeley campus contrasts with the three-story buildings on the west side of the corridor.



Looking north along Oxford Street, from its intersection with Addison, University Hall (left) contrasts significantly with U.C. campus landscaping and low-rise buildings in the background.





[a] As seen from the Lawrence Hall of Science, the downtown district is located by the Great Western and Wells Fargo Buildings.



[b] From Cragmont Park, the Berkeley Downtown area is hardly distinguishable from the urban backdrop of the East Bay



From locations immediately adjacent to the Downtown, the higher structures define the skyline. Figure 23[a], which shows the view from the west side of the UC Berkeley campus, illustrates this situation. Intermittent plantings of street trees break up the horizontal and vertical building lines, as can be seen in Figure 23[a].

**Pedestrian Environment.** The pedestrian environment includes such elements as sitting areas, street trees, lighting, sidewalk characteristics, and wind and sunlight conditions. The heavy concentration of retail and office activities in the Downtown results in significant pedestrian activity during daylight hours. Movie theaters and restaurants also generate pedestrian activity during nighttime hours.

**Open Space.** The only large landscaped open space area in Downtown Berkeley is the Martin Luther King, Jr. Park which is located on Martin Luther King Jr. Way between Allston Way and Center Street (see Figure 24). This park consists of a large open lawn area at its western end edged by Camphor (*Cinnamomum camphora*) and Cedar (*Cedrus deodara*) trees. A small children's play area, also located at the western end of the park, is surrounded by a thick hedge.

The eastern portion of the Martin Luther King Jr. Park consists of a paved area with benches and a fountain that are surrounded by full-grown Lombardy poplars (*Populus nigra italica*), Redwoods (*Sequoia sempervirens*), and Magnolias (*Magnolia grandiflora*). The park is surrounded by two- to four-story buildings on all sides which restrict outward views.

Other public outdoor sitting areas located along Shattuck Avenue consist primarily of corner areas located in the wider sidewalk portions of Shattuck Avenue at the north and south ends of parking bays. Landscape and pedestrian elements include tile, wood or concrete benches, special paving material, and planters with shrubbery to define the boundaries of the sitting areas.

Figure 25 [a] shows a sitting area which is primarily used by AC Transit bus patrons near the Downtown BART station. As can be seen in Figure 25 [a], brick paving material in a diagonal pattern visually sets this area apart from the standard concrete sidewalk areas of the Downtown. The Bank of America Building at the corner of Shattuck Avenue and Center Street has a large sitting area at the southwest corner of the parcel. The south-facing orientation of the benches and the lack of shading by trees makes this a highly popular sitting area within Downtown Berkeley, especially during the lunchtime hour on sunny days.

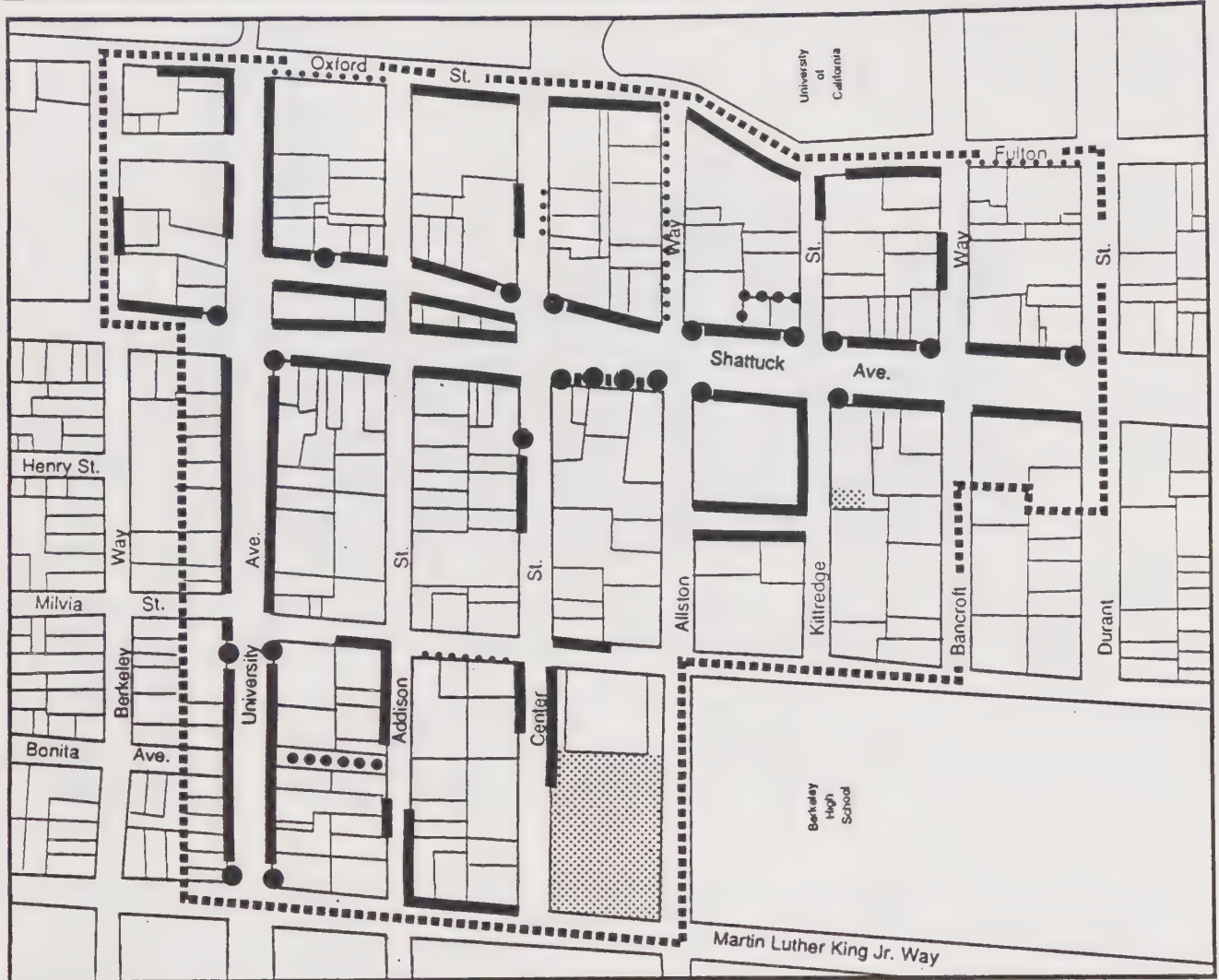
Other informal sitting areas that exist within the downtown area are created by architectural elements of individual buildings. For example, the McDonalds Restaurant at the corner of University Avenue and Shattuck Avenue includes a brick sitting area that is attached to the building as part of a planter area. Other Downtown buildings include stairways and low protruding walls that are used for short periods.

**Sidewalk Visual Elements.** Many portions of the sidewalks in Downtown Berkeley, especially at intersection corners, include a diversity of free-standing newsracks. Figure 25[b] illustrates how these newsracks can take up large portions of the sidewalk and create a dominating visual element for pedestrians. Another major visual element for pedestrians is the array of garbage receptacles which are dispersed along sidewalk areas. Most of these, made of a concrete aggregate compound with a metal lid, stand approximately three feet above the ground (see example at right side of Figure 25[a]).

Figure 23: View of Downtown Berkeley from the U.C. Campus



[a] Looking west from the U.C. Berkeley Crescent entrance, one sees a diverse sample of buildings in the Downtown area. Buildings greater than six stories high define the skyline.



- Sidewalk Areas with Continuous Tree Plantings
- Sidewalk Areas with Scattering of Trees or Inconsistent Species
- Public Park
- Public Seating Areas
- Private Outdoor/Pedestrian Areas

**Figure 24**  
**Downtown Landscaped and Pedestrian Areas**





Figure 25: Outdoor Sitting Areas and Newsracks



[a] The sitting areas near the BART Station include distinctive brick paving materials.



[b] Newsracks take up space along sidewalk areas in much of Downtown Berkeley.

Sunlight Access and Wind. Due to the predominantly low-rise nature of Downtown Berkeley buildings, sunlight access is provided to the pedestrian environment for many months of the year. However, in the winter months, when the sun is at a low angle in the southern portion of the sky, many east-west streets are shaded on the south sides. Consequently, the pedestrian areas are cooler and less desirable than the unshielded north sides. The most significant shading effects are created by the taller buildings which are located on the south sides of east-west streets in Downtown Berkeley. As can be seen by reviewing Figure 14, this would occur along isolated portions of all the east-west corridors in the Downtown, but most significantly for the portion of University Avenue between Oxford Street and Shattuck Avenue where two buildings are seven stories in height.

Street width also affects the degree of shading for the pedestrian environment. The narrower the street, the more likely that shading will occur for both the north and south sidewalks if tall buildings are constructed on the south sides of the street. The most narrow east-west streets in Downtown Berkeley are Addison Street and Kittredge Street. The widest are University Avenue and Durant Avenue. However, the south side of Durant Avenue is outside the Downtown Berkeley boundaries.

Prevailing winds in Berkeley are from the west, coming through the Golden Gate and heading toward and over the Berkeley Hills. Therefore, pedestrians walking along east-west corridors in the Downtown are most affected by such winds. For the north-south corridors, pedestrians walking along the west sides of the street would be sheltered from the prevailing winds by buildings adjacent to the sidewalk. Due to the low-rise nature of Downtown Berkeley, the buildings do not create a wind tunnel effect which is normally associated with a number of very tall structures.

Street Trees and Landscape Elements. Street trees throughout the downtown provide a pedestrian-scale element which contrasts with the vertical and horizontal lines of building facades and street/sidewalk paving. Figure 24 shows the location of street tree plantings within the Downtown. These vary from areas of continual plantings of one tree species to areas devoid of any street trees. The City is currently in the process of computerizing information on the location and types of existing street trees as well as planned areas for new tree plantings. This computerized data base is not expected to be completed until early 1989.

Examples of street trees found in Downtown Berkeley include Tulip trees (Liriodendron tulipifera), Pittosporum (Pittosporum undulatum), Sweet Gum (Liquidambar styraciflua), London Plane trees (Platanus acerifolia), and Evergreen Pear (Pyrus kawakami).

Downtown Berkeley does not currently have any areas that include fountains or water landscape elements which are commonly found in a number of urban areas. Landscape elements within Downtown are limited to lighting fixtures, benches, street trees, planter boxes and some areas of special paving materials. The most consistent landscape elements are found along Shattuck Avenue. These are discussed above in the discussion of the overall Shattuck Avenue view corridor.

### Policies and Programs Significantly Affecting Urban Design and Visual Impacts

While it is the underlying policies and programs that would lead to new growth, which could affect the design and visual character of Downtown Berkeley, it is the new development itself that directly causes the impacts. The following sub-section is therefore the focus of impact analysis for these topics.



## Impacts Due to New Development Allowable Under the Plan

Introduction. This section describes the potential impacts of each alternative on urban design, historic structures, visual quality and the pedestrian environment within the downtown area. This analysis focuses on vacant and underutilized lots because these lots would experience the greatest change under the regulations and incentives proposed by the *Plan*.

Impacts Common to All Alternatives. All of the proposed alternatives would have the potential impact of visually changing the character of the Downtown through the introduction of new buildings on undeveloped or underutilized parcels. The degree of visual impacts would vary by alternative, as discussed below. As a Commercial District, projects would be subjected to the design review process which is outlined in the existing Design Review Ordinance (Chapter 15A of the City of Berkeley Zoning Ordinance), which is available for review at the Community Development, Department. Design guidelines described in the ordinance would be used by City staff and/or the Design Review Committee to evaluate projects. Compliance with the guidelines by specific projects is determined at the time individual project designs are submitted for review. The overall Design Review process is evaluated in this EIR.

The City's guidelines for design review are specific in some areas such as shading of parking areas and location of bicycle racks. However, in a number of topics, the guidelines are generalized in terms of architectural styles and materials. A major emphasis is placed on compatibility with and respect for adjacent structures. This generality promotes creativity in architectural design and prevents a repetitive style. At the same time, the generality makes the Design Review process somewhat arbitrary and subjective, depending upon the likes and dislikes of City staff or members of the seven-member Design Review Committee. In the evaluation of individual projects, findings are generally made in relation to how the project does or does not conform to the established guidelines. However, some may think that these findings lack specificity.

An appeals process is allowed by the Design Review Ordinance. Applicants can appeal staff recommendations to the Design Review Committee. The decision of the Committee can in turn be appealed to the Board of Adjustments.

The purpose and intent of the design review process are stated in the Design Review Ordinance as follows:

- ☐ The purposes of design review are to ensure that new construction and alterations within downtown and neighborhood commercial areas are compatible with the existing neighborhoods, to provide a pleasing urban environment for Berkeley residents, pedestrians, and building occupants, and to encourage excellence in design.
- ☐ It is the intent of design review to consider a project in relation to its urban context, and to focus only on the subject matter areas included in the guidelines.
- ☐ The guidelines are intended to give direction to the Planning Department staff, the Design Review Committee and the Board of Adjustments in the review and approval of proposed designs for construction in non-residential districts. They are also intended to assist applicants in the planning and design of their projects. They are intentionally generalized to encourage individual creativity. It is not expected that every project will be able to respond to every guideline.



In terms of historic structures, the Design Review Ordinance includes a generalized statement that projects which involve a Landmark Building or structure of merit shall comply with Chapter 3.24, Landmarks Preservation Commission, of the Berkeley Municipal Code. The guidelines also state that the height of buildings, especially for adjacent historic structures, should be respected in the design of new buildings. No other specific guidelines relating to historic structures are provided in the design review guidelines (Section 15A.6 of the Berkeley Municipal Code). Thus, visual impacts from new development could affect historic structures unless more specific guidance is provided to the designers/architects of new buildings in Downtown.

Another potential impact common to all four alternatives is the overall impact on pedestrian areas and open space within the Downtown. Aside from impacting solar access to sidewalk areas to varying degrees, each alternative could result in new development adjacent to public sidewalk areas. Pedestrian areas in the Downtown environment have important visual characteristics that have been addressed earlier in this section of the EIR and that would be appropriate for a number of improvement measures. Policies 2.1, 3.2, 3.3, 3.5., and 4.5 of the *Plan*, which are shown in Table 15, specifically address the pedestrian environment. The relationship of the four alternatives to these policies are addressed in Table 15.

Table 15 summarizes the general relationship of the four alternatives to all of the policies of the *Plan* related to historic structures and urban design.

Increased development in Downtown Berkeley would increase pedestrian activity and demand upon public outdoor areas. Due to the existing condition and limited numbers of public open space areas in the Downtown, specific recommendations regarding open space should be included in the *Plan*.

All of the 24 identified parcels within Downtown Berkeley that are either underutilized or undeveloped have varying degrees of "visual sensitivity". Table 16 identifies a number of criteria to define visual sensitivity and to show how each of the 24 parcels relate to these criteria. As can be seen from Table 16, the parcels which match the greatest number of the criteria for visual sensitivity are Parcels 1, 2, 3, 16, 20, 21, 22, and 24. The relationship of their sensitivity to varying alternatives is addressed below.

New parking structures could create visual impacts in Downtown Berkeley, largely due to the frequent absence of detailing found in the design of parking structures and potential glare from fluorescent fixtures within the parking structures. Such visual impacts would be most significant for corner parcels and along the more major view corridors.

Wind conditions along pedestrian corridors of Downtown Berkeley are not expected to be affected in significantly different ways by the alternatives. The development of 100-foot structures under the "No Action" alternative could channel prevailing westerly winds and this would be most significant for Parcels 18 and 19, which are adjacent to each other. However, wind impacts are not expected to be significant under any of the alternatives due to the dispersed location of the undeveloped and underutilized parcels and the predominantly low-rise nature of the Downtown. [Text continues on page 110.]

Table 15

Relationship of Alternatives to Policies Related to  
Historic Preservation and Urban Design

	(1) No Action Alternative	(2) Base Alternative	(3) Maximum Bonus Alternative	(4) Low Intensity Development
Objective 1. PROVIDE CONTINUITY BETWEEN THE OLD AND THE NEW IN THE BUILT ENVIRONMENT. RETAIN THE SCALE AND THE UNIQUE CHARACTER OF THE DOWNTOWN.				
<u>Policies:</u>				
1.1 Retain the older, historically valuable buildings in and around the Downtown. Encourage adaptive re-use of older buildings by promoting rehabilitation and reuse of existing structures that contribute to the overall design character of Downtown.	Would be most likely to result in demolition of "Contributing Structures" located on Parcels No. 6 and 9 (See Figure ____). Potential concentration of 100-foot structures along Fulton Street could impact nearby significant structures and Landmark Buildings.*	Lower (50-foot) height limits along the Oxford Edge of Downtown would be more compatible with historic structures east of Shattuck Avenue than the No Action Alternative's 100-foot heights. Due to 40-foot height limit in Other subareas, parcels 6 and 9 (Contributing Structures) would not likely be demolished.	Potentially greater impact than the Base Alternative to Parcels 6 and 9 due to 60-foot height limit which may encourage demolition of these Contributing Structures.	Impacts to Parcels 6 and 9 would be similar to the Base Alternative impacts. Would have the least impacts of all alternatives on existing historic structures due to 40-foot height limit for all identified development parcels.
1.2 Maintain the existing scale of Downtown. New construction should fit into the context of the existing built environment and complement Downtown's historic character. Encourage infill development that is compatible with existing uses and improves the pedestrian environment and the streetscape. Permit taller buildings only if they are in scale with other structures in the area.	Would significantly conflict with existing low-rise scale of downtown. Only development on Parcels 6, 13 and 14 would be compatible in height with adjacent structures.*	For the Core subarea (allowing 65-foot heights), Parcels 14, 18 and 19 would be most compatible with adjacent structure heights. Parcels 7, 13 and 20 would be the most out-of-scale. Development along Fulton Street could conflict with open space along the edge of the U.C. campus.	Impacts would be similar to the Base Alternative but magnified due to higher allowable heights. Most significant conflicts with existing nearby structure heights would occur on Parcels 7, 13 and 20.*	Would have the least impacts of all alternatives in terms of conflict with existing scale of Downtown Berkeley. Incompatibility could occur due to buildings being too low for Parcels 14, 18, 19 and 22 in relation to heights of adjacent structures.
1.3 Increase citizen awareness of the architectural heritage of Downtown.	Potential increase in high-rise structures could detract visually from historic buildings and thus decrease awareness.	50-foot height limits along Fulton Street may detract from awareness of historic structures in vicinity.	87-foot height limit for Parcels 13, 15, 18 and 20 may detract from adjacent historic or contributing structures.*	Would have the least impacts of all alternatives to awareness of architectural heritage, as height limits would be most compatible with that of existing structures.
1.4 Promote earthquake reinforcing of older and historic buildings.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.
1.5 Establish specific design review criteria and regulations that express the need for projects to respect and preserve the historic nature of the Downtown.	All alternatives should comply, but achieving compliance may be most difficult with this alternative due to allowable height limits.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply, but achieving compliance may be easiest with this alternative due to allowable height limits.

\*Potentially significant impact.





Table 15

Relationship of Alternatives to Policies Related to  
Historic Preservation and Urban Design (Page 2)

	(1) No Action Alternative	(2) Base Alternative	(3) Maximum Bonus Alternative	(4) Low Intensity Development
Objective 2: STRENGTHEN THE DOWNTOWN'S IDENTITY, IMAGE AND SENSE OF PLACE.				
<u>Policies:</u>				
2.1 Encourage cooperation between the business community and the City in the establishment of an attractive and successful Downtown. Encourage individuals (merchants, owners, and business people) to contribute and maintain landscaping throughout Downtown on their own property and in the public domain.	New landscape improvements may be most easily accomplished with this alternative due to increased revenue associated with high allowable density. The design flexibility which stems from allowable floor area ratios and heights could encourage landscaped areas.	Allowable floor area ratios (except for areas of 3.0:1 FAR) could encourage landscaped areas. Subareas proposed for 3.0:1 FAR and 3-story height limits would not enjoy the flexibility of the Core and Oxford Subareas.	Allowable floor area ratios (except for areas of 4.0:1 FAR) could encourage landscaped areas. Subareas proposed for 4.0:1 FAR and 4-story height limits would not enjoy the flexibility of the Core and Oxford Subareas.	New landscaping improvements may be least likely with this alternative due to low allowable density. Allowable floor area ratio would not encourage landscaped areas.
2.2 Recognize that different parts of the Downtown have special character, and develop programs to strengthen and reinforce it. Develop land use, density, special design features, and building guidelines.	Allowable height limits would not reinforce existing low-rise character.	Allowable height limits are sensitive to existing Downtown character.	Allowable height limits could detract from existing character.	Low allowable height limits may reinforce much of existing Downtown character but may be too low for center of Downtown.
2.3 Encourage a compact Downtown to conserve open space and the natural environment in other parts of the City.	Would meet this policy more successfully than other alternatives by allowing high-intensity development.	Concentrates higher intensity development in Downtown Core but limits heights to 65 feet.	Concentrates high-intensity development in Downtown Core Area with 87-foot height limit.	May not succeed in making a compact Downtown or a Downtown that would be distinguishable from other commercial areas.
2.4 Create a visually cohesive district which retains its early 20th Century characteristics.	Refer to comments on Policies 1.1 and 1.2	Refer to comments on Policies 1.1 and 1.2.	Refer to comments on Policies 1.1 and 1.2.	Refer to comment on Policies 1.1 and 1.2.

\*Potentially significant impact.



Table 15

Relationship of Alternatives to Policies Related to  
Historic Preservation and Urban Design (Page 3)

	(1) No Action Alternative	(2) Base Alternative	(3) Maximum Bonus Alternative	(4) Low Intensity Development
Objective 3: IMPROVE THE VISUAL AND ENVIRONMENTAL QUALITY OF THE DOWNTOWN, WITH AN EMPHASIS ON THE PEDESTRIAN ENVIRONMENT				
<u>Policies:</u>				
3.1 Test proposed new development as to its potential impact on views and solar access to and from important public places.	Would have greatest impact on views and solar access due to allowable heights. Fulton Street afternoon shading would be most significant.*	View and solar access impacts would be less than those from "No Action" and "Maximum Bonus" Alternatives. Fulton Street impacts could, however, be significant.	View and solar access impacts would be less than No Action Alternative. Concentration of parcels along Fulton Street and 75-foot height limit may create significant solar access impacts during afternoon hours.*	Would have least impact of all alternatives on views and solar access due to 40-foot height limit.
3.2 Create plazas and other urban spaces to enhance the pedestrian environment and increase the number of people who will use Downtown. Enhance sidewalks and streetscapes to reflect the scale and early 20th Century historic quality of Downtown architecture.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.
3.3 As part of private and public development and renovation projects, attempt to maximize green spaces, natural surfaces, and plants in the development plans.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.
3.4 Support entrance and facade remodelling on Downtown buildings that will contribute to the pedestrian environment and the historic character of Downtown.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.
3.5 Develop City programs to improve the pedestrian and aesthetic nature of the Downtown environment. Encourage cooperation between the business community and the city in the establishment of an attractive, functional, meaningful, and successful Downtown.	All alternatives should comply. May be most successfully accomplished with this alternative due to revenue associated with high-intensity development.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.

\*Potentially significant impact.





Table 15

Relationship of Alternatives to Policies Related to  
Historic Preservation and Urban Design (Page 4)

	(1) No Action Alternative	(2) Base Alternative	(3) Maximum Bonus Alternative	(4) Low Intensity Development
Objective 4: ENHANCE AND IMPROVE THE PHYSICAL CONNECTION BETWEEN DOWNTOWN AND THE SURROUNDING NEIGHBORHOODS AND INSTITUTIONS, SUCH AS THE UNIVERSITY OF CALIFORNIA.				
<u>Policies:</u>				
4.1 Adopt development guidelines that promote linkages and better connections between the Downtown and the University; and between the Downtown and the neighborhood shopping districts.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.
4.2 Protect adjacent residential neighborhoods with guidelines that scale down development at the periphery of Downtown (i.e., a buffer zone).	50-foot height limit at northern end of Downtown could result in inadequate buffer zone.*	40-foot height limit at northern end of Downtown would be closer in scale to adjacent residential neighborhoods than the No Action or Maximum Bonus Alternatives.	50-foot height limit at northern end of Downtown could result in inadequate buffer zone.*	40-foot height limit throughout Downtown would be closer in scale to adjacent residential neighborhoods, though it would not involve a "scaling down" of development at the periphery.
4.3 Development along the Oxford edge should incorporate open spaces to provide a transition between the Oxford edge and the more dense areas of the Downtown. Maintain visual openness along Oxford Street.	Allowable heights of this alternative (100 feet) may not maintain visual openness along Oxford Street.*	50-foot height limit along Oxford/Fulton would help to maintain visual openness when compared to the No Action Alternative.	75-foot height limit along Oxford/Fulton may result in "wall" of urban development and interfere with visual openness.*	This alternative may be the most successful of all alternatives in maintaining visual openness due to 40-foot height limit along Oxford/Fulton Streets.
4.4 Activity and new development in the Civic Center should be oriented toward the Martin Luther King Jr. Park and away from the residential neighborhood. Expansions or additions to buildings should keep within the character of the Civic Center and maintain the existing setback of Old City Hall. The height should not exceed the Old City Hall roofline.	Allowable 100-foot height would conflict with Civic Center character.*	40-foot height limit at western edge of Downtown would maintain Civic Center character.	60-foot height limit at western edge of Downtown would exceed Old City Hall roofline.	40-foot height limit would maintain Civic Center character.
4.5 Use common elements, such as street trees, paving material and Strawberry Creek, to connect the University and the Downtown.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.	All alternatives should comply.

\*Potentially significant impact.





Table 16

## Matrix of Visual Sensitivity

	Parcel Numbers of Undeveloped or Underutilized Parcels																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Adjacent to Landmark Bldg:	✓	✓	✓	✓						✓						✓	✓	✓				✓		✓
Adjacent to Contributing or Significant Structure	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓			
Adjacent to bldg. that is 1-2 stories in height	✓	✓	✓	✓			✓		✓		✓	✓					✓	✓		✓	✓		✓	✓
Located on corner of block	✓	✓	✓					✓			✓			✓	✓	✓				✓	✓	✓	✓	✓
Located adjacent to residential structure with windows that could have sunlight access blocked	✓	✓													✓	✓	✓				✓			✓
Located on south side of sidewalk/street where sunlight could be blocked	✓		✓			✓		✓		✓			✓	✓		✓		✓	✓	✓	✓	✓	✓	✓
Located on south side of narrow street where solar access could be most affected													✓	✓								✓	✓	
Located at terminus of view corridor/downtown street				✓		✓																		
Highly visible from public park or outdoor sitting area								✓							✓				✓					
Within Oxford/Fulton view corridor that separates U.C. Campus from downtown	✓															✓					✓	✓		✓

The potential for light and glare impacts would be most significant for those alternatives with the greatest allowable heights due to the potential for a number of highly visible, unscreened windows to have lights shining during nighttime hours. However, specific light and glare impacts would depend upon individual building design. Outside building materials could include reflective materials which would be visible from great distances due to allowable heights. Use of such materials could have significant visual impacts on Downtown, especially in relation to the many historic structures.

Impacts Specific to Alternative 1. The impacts discussion for this alternative and those which follow focus on three areas of impact: historic structures, view corridors and the pedestrian environment.

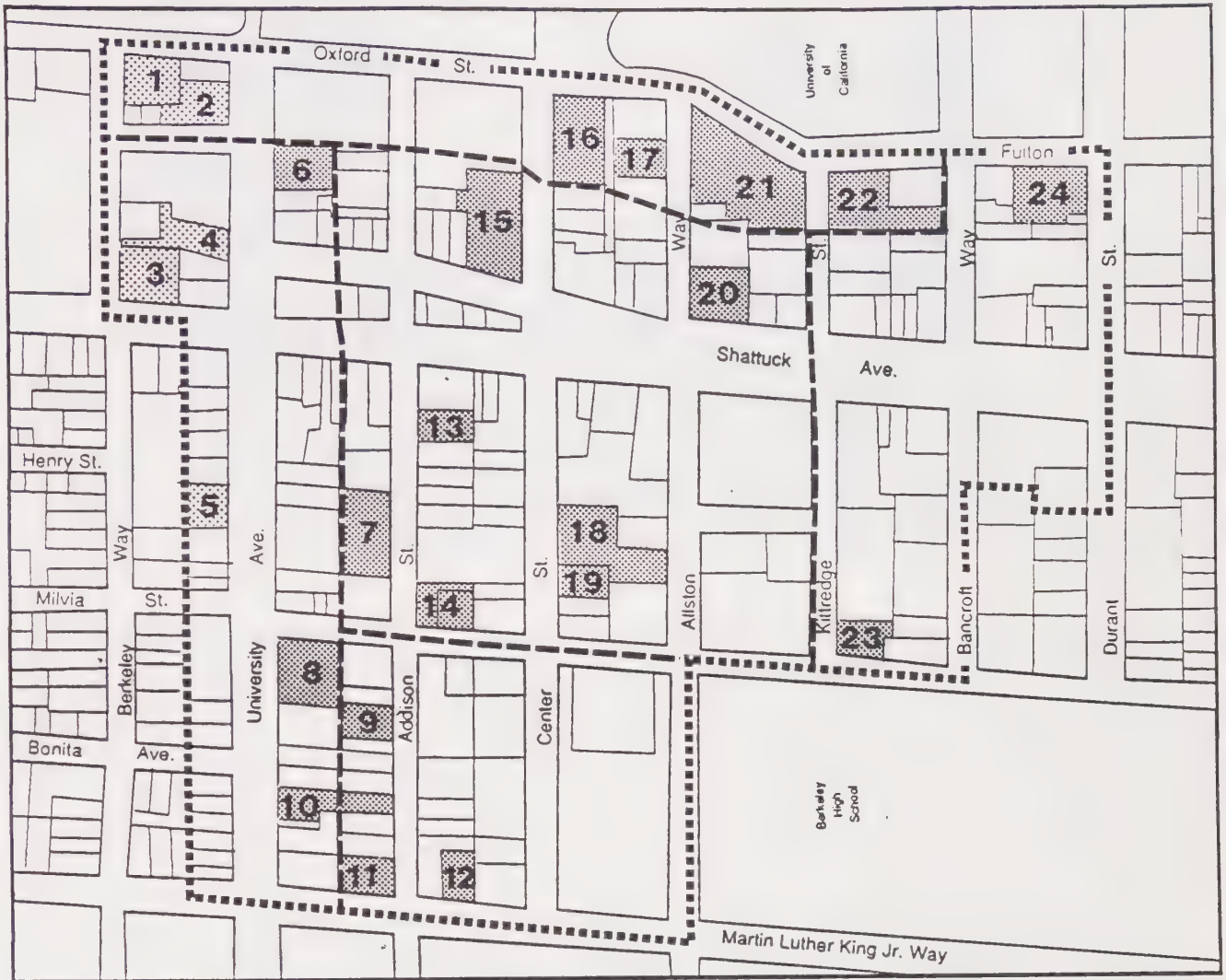
Historic Structures. This alternative would have the greatest potential impact on historic structures due to the existing allowable height limit of 100 feet in most of the Downtown area (see Figure 26). Many of the identified Landmark Buildings, Significant Structures and Contributing Structures in Downtown Berkeley are less than three stories in height (see Figures 10 and 14). Thus, 100-foot buildings adjacent to these structures would result in a strong visual contrast in scale and potentially detract from the qualities of the historic structures. The greatest impacts could occur as a result of development on Parcels 10, 13, 16, 17 and 22-24 which are located immediately adjacent to Landmark Buildings (see Table 16).

Impacts in terms of architectural design compatibility would depend upon the individual building designs that are submitted. Without specific guidelines for directing and evaluating the design of new projects that are adjacent to Landmark Buildings, visual impacts to such structures could be significant.

View Corridors. As noted, the continuation of existing development regulations would allow 100-foot high buildings at most of the existing development sites. All buildings north of University Avenue would be limited to 50 feet (see Figure 26). The building heights allowed by this development alternative could significantly affect downtown view corridors as well as dramatically alter the present form of the downtown skyline, especially in comparison with the allowable heights of the other three alternatives.

This impact would be greatest along the Oxford/Fulton Street corridor where a nearly continuous urban wall of 100-foot tall buildings could be constructed (see Figure 26). The impact of these tall buildings would be magnified by the contrasting non-urban fabric of setback buildings and landscaped areas at the western edge of the U.C. Berkeley campus. New 100-foot structures would also create a strong contrast to the current visual openness of this portion of Downtown, which is characterized by many surface parking areas and buildings less than three stories high. Figure 27[a] shows (through the application of an overlay gray pattern) how the massing of a new 100-foot structure at the corner of Fulton Street and Kittredge Street would impact the Kittredge Street view corridor.

Another view corridor which could be significantly affected by this alternative would be the Addison Street corridor, which is one of the most narrow in all of Downtown Berkeley. This corridor could have a number of new 100-foot buildings constructed between Shattuck Avenue and Martin Luther King Jr. Way. These nine-story new buildings would be interspersed among a number of one- to three-story structures which exist along Addison Street and thus could create strong visual contrasts for the pedestrian or driver using this Downtown corridor. The increased height of structures along the Addison Street corridor would create a tunnel effect for the views towards the Berkeley Hills and the San Francisco Bay.



 4 Stories or 50 Feet

 9 Stories or 100 Feet

 10 Development Site

Refer to Figure 14 for Existing Building Height



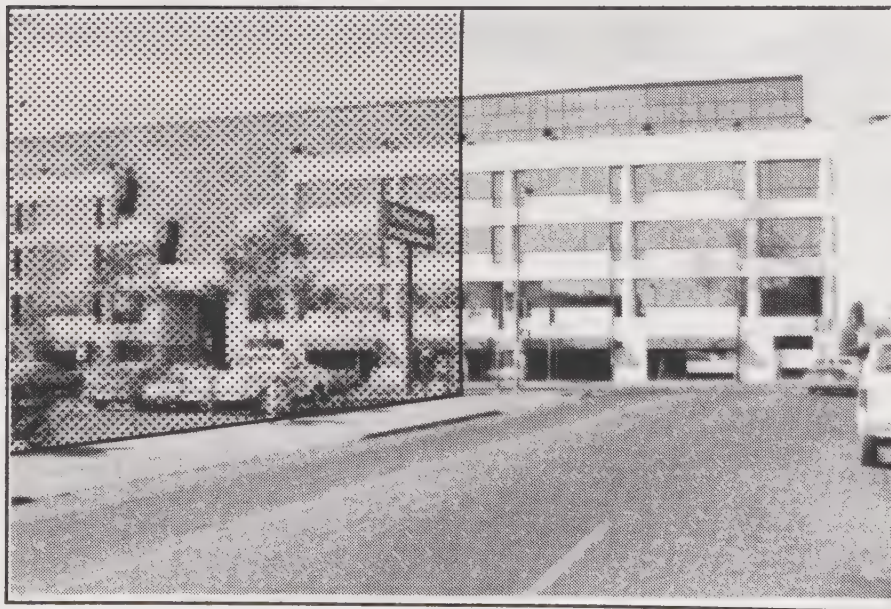
**Figure 26**  
**Height Limits for**  
**No Action Alternative**



Figure 27: Photomontage of Fulton Street and Addison Street Corridors with Height Limits of the No Action Alternative



[a] New 100-foot structures at the intersection of Fulton Street and Kittredge Street would create strong urban walls along the Kittredge Street view corridor.



[b] A 100-foot structure at the intersection of Milvia Street and University Avenue would block the view of the Golden Bear Building and create an enclosed view corridor.

New development in the core area could lead to as many as 19 nine-story buildings east, southeast and northwest of the existing urban peak which consists of two 12-story structures at the Shattuck/Center Street intersection. The observer entering Downtown Berkeley would notice a skyline dominated by a scattering of many tall buildings in contrast to the two neighboring 12-story structures currently seen in the Downtown area (see Figure 14).

The allowable 100-foot structures along University Avenue between Milvia Street and Martin Luther King Jr. Way may result in a "gateway" to Downtown Berkeley for those entering from the west. This would be especially true for development of Parcel No. 8 which would be directly across University Avenue from the six-story Golden Bear Building. Figure 27[b] shows the visual impact of a 100-foot structure at the intersection of University Avenue and Milvia Street.

Views of the Downtown district from adjoining neighborhoods and the Berkeley Hills would also change. Views from the Berkeley Hills would not be significantly impacted due to the overall urban development surrounding Downtown Berkeley and the significant topographic change between Downtown and the hills. In general, new development within the study area, when seen from a distance such as the Berkeley Hills, would visually reinforce the location of the Downtown district in the more level area between San Francisco Bay and the Berkeley Hills.

*Pedestrian Environment.* The pedestrian environment under this alternative would be the most affected in terms of limited solar access. Shading impacts would be most significant for the Oxford/Fulton view corridor where 100-foot structures would restrict afternoon solar access for a continual stretch of the view corridor south of Center Street. Other pedestrian areas that would be most affected would be those to the north of Parcels No. 6, 8, 10, 13, 14, 16, 18, 19, 20, 21, 22 and 23. Of these, the most significant shading impacts would occur for Parcels No. 13, 14, 22 and 23 which are located on the south sides of the narrowest streets in the Downtown (Addison Street and Kittredge Street). See Table 16.

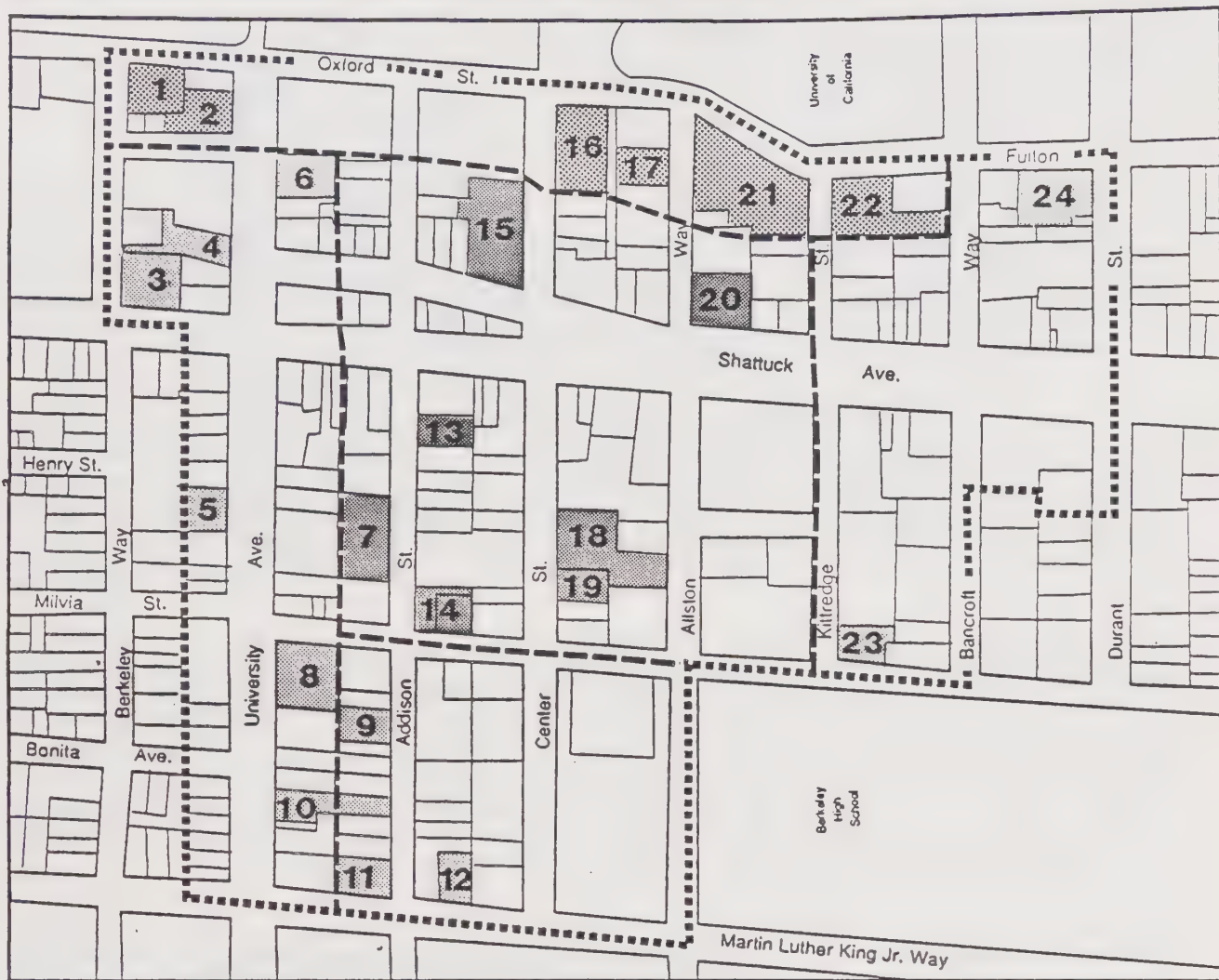
Heavily-used outdoor sitting areas along Shattuck Avenue could be impacted by this alternative if new 100-foot structures are constructed along Shattuck Avenue. However, at this point, specific development parcels along Shattuck Avenue have not been identified. Parcels No. 13 and 20 would be the most likely to have significant solar access impacts to outdoor sitting areas on Shattuck Avenue.





The Bank of America parcel (No. 15) could be used for the development of a new 100-foot structure. While this would impact a heavily-used, south-facing outdoor sitting area, the opportunity would exist for the new building to integrate a south-facing outdoor area into the design of the project.

#### Impacts Specific to Alternative 2.

*Historic Structures.* This alternative would entail maximum height limits of 65 feet in the core area of Downtown, 50 feet along the Oxford/Fulton corridor, and 40 feet along the northern, northwestern and southeastern edges of Downtown (see Figure 28). For this reason, visual impacts to historic structures would be less significant than under Alternative 1. Parcel 13 is the only parcel adjacent to a Landmark Building in Downtown Berkeley which, with this alternative, would allow construction to a maximum height of 65 feet. However, the Landmark Building (Wells Fargo) is a 12-story structure. Therefore, visual impacts as related to scale would not be significant. As with the "No Action" alternative, building design compatibility would have to be determined at the time that individual projects are proposed.





-  3 Stories or 40 Feet
-  4 Stories or 50 Feet
-  5 Stories or 65 Feet
-  Development Site

Refer to Figure 14 for Existing Building Height



**Figure 28**  
**Height Limits for**  
**Base Alternative**



*View Corridors.* This alternative would preserve the existing University Avenue view corridor by limiting development along its edges to three stories. However, the Parcel 2 at the eastern end of the corridor, at the intersection of University Avenue and Walnut Street, would have a maximum allowable height of four stories or 50 feet. A more specific "gateway" effect would be created at the eastern end of University Avenue by the construction of a 50-foot building (Parcel No. 2) directly north of the seven-story University Hall. This visual impact would be most noticeable to the westbound motorist or pedestrian leaving the U.C. campus.

The allowable development height for major portions of University Avenue would be the same as the many two and three-story structures that currently line the street. Thus, the University Avenue "gateway" to Downtown Berkeley for eastbound motorists and pedestrians would be identified by a continual urban wall of low-rise structures which would not be significantly different than the other portions of University Avenue outside of the Downtown area.

The proposed 40-foot and 50-foot height limits for the western and southern portions of the study area would blend in with the scale of existing structures and would create more of a transition, buffer zone to the outlying areas of the Downtown.

Proposed building height restrictions on new development in the core Downtown area would not significantly alter existing view corridors. The proposed height limit (65 feet) would limit buildings to a height typically found in the core area but significantly less than the 12-story structures located at the Center Street/Shattuck Avenue intersection.

This limitation would strengthen the definition of the Addison Street and Center Street view corridors without creating significant tunneling effects as would be possible with the "No Action" alternative. However, due to the narrow width of Addison Street, the lack of street trees and the predominance of buildings which are less than three stories high, development of Parcels 7, 13 and 14 could create strong contrasting building scales for this corridor. Figure 29[a] shows the general visual impact, in terms of scale, of a 65-foot structure along the Addison Street Corridor just east of Milvia Street.

For the Oxford/Fulton Street corridor, the proposed maximum development height would be 50 feet or four stories. This section of the study area is located at the top of a slope, above the core Downtown district. Sky views and views to the western and eastern horizon would not be significantly impacted. Due to topographic conditions, new development along Oxford Street may appear to equal the height of new development in the core Downtown area when viewed from the western portion of the U.C. campus. Future 50-foot structures may result in an "urban wall" which would contrast with the landscaping and setback buildings on the U.C. campus between Allston Way and Bancroft Way. New buildings in this portion of the Oxford/Fulton corridor would contrast significantly with the current visual openness allowed by existing large surface parking areas (see Figure 29[b]).

Views from the Berkeley Hills would not change significantly with this alternative as new development would compliment the existing Downtown building bulk and height when seen from these vantage points.

*Pedestrian Environment.* Potential impacts of this alternative to the pedestrian environment in terms of solar access would be less than those of Alternative 1 and Alternative 3. Alternative 2 would allow height limits ranging from 40 feet to 65 feet. The pedestrian areas which would be most affected would be those to the north of Parcels 13, 14 and 20 which are located on the south sides of narrow streets where 65-foot structures could be constructed. As shown in Table 16, Parcels 13 and 14 are located along Addison Street, one of the narrowest in Downtown Berkeley.

Figure 29: Photomontage of Addison Street and Oxford Street  
with Height Limits of Base Alternative



[a] A 65-foot structure along the Addison Street Corridor just east of Milvia Street would entirely block views of the Berkeley Hills which are currently seen.



[b] A 50-foot structure along Fulton Street near its intersection with Kittredge Street would create a strong urban wall, especially if setbacks are not provided. Existing sky views would be significantly altered.



Another heavily-used pedestrian area that could be affected in terms of solar access would be the Oxford/Fulton corridor where 50-foot structures would be allowed. During afternoon hours, when Berkeley is most likely to have sun, these 50-foot buildings would block solar access to the western and possibly the eastern sidewalks along Oxford/Fulton Street. Due to the many surface parking areas which currently exist along this corridor, solar access is not interrupted until the sun is so low that buildings to the west create shading.

The Shattuck Avenue pedestrian environment could be significantly impacted in terms of shading impacts during the early daytime hours for those sidewalk areas just west of Parcels 15 and 20. With the potential for 65-foot structures on these two parcels, shading impacts could discourage pedestrians from using the outdoor sitting areas in the vicinity of these parcels (see Figure 24).

### Impacts Specific to Alternative 3.

*Historic Structures.* Impacts on historic structures with this alternative would be similar to the "Base" alternative but would be potentially intensified due to greater allowable heights. Allowable heights with this alternative would range from 87 feet in the core area of Downtown (see Figure 30) to 75 feet along the Oxford/Fulton corridor and 60 feet at the northern, eastern, and southern edges of Downtown Berkeley.

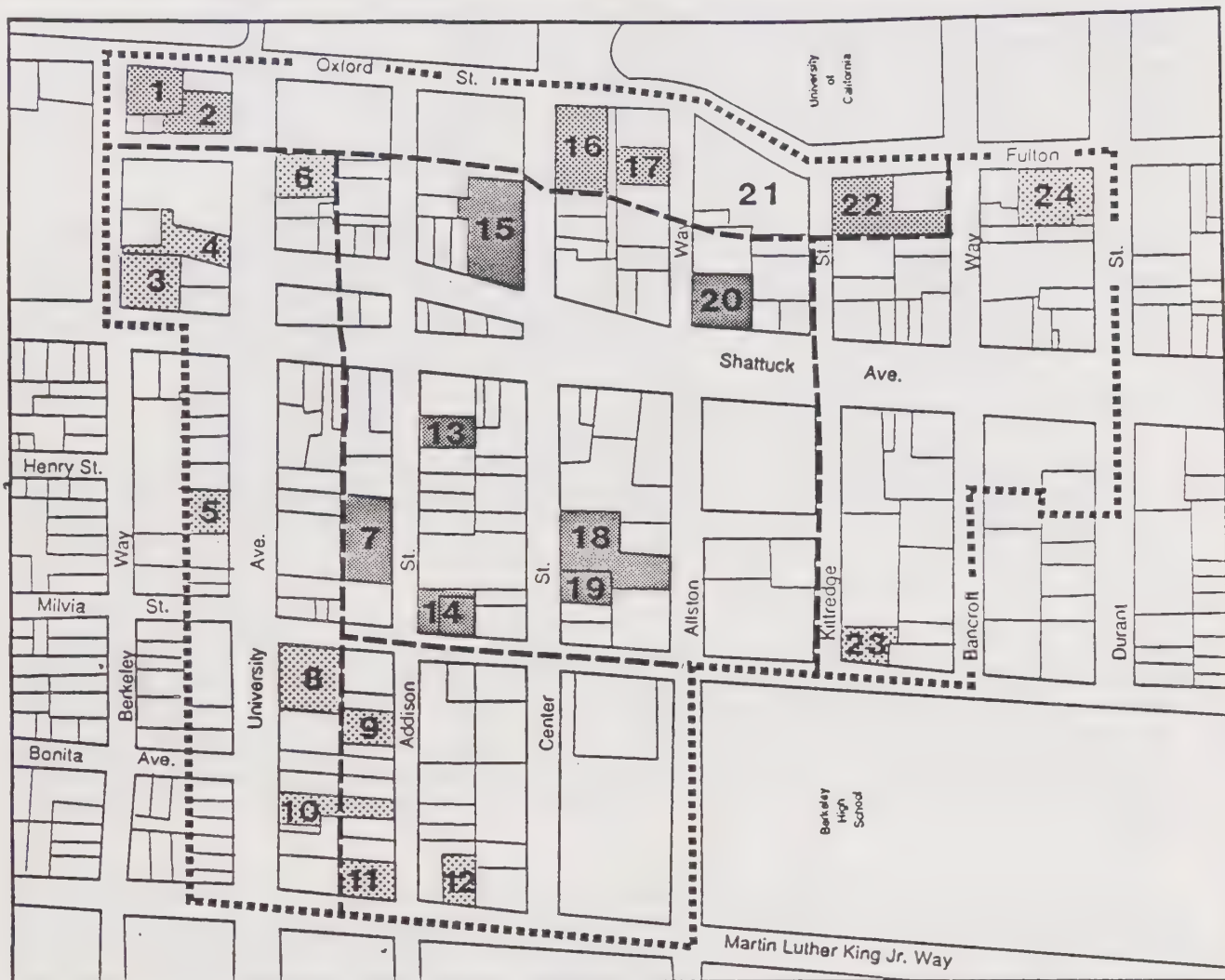
As with the "Base" alternative, the impact of an 87-foot building on Parcel 13, which is located adjacent to a Landmark Building, may not be significant due to the 12-story (approximately 120 foot) height of the Landmark Building. Design compatibility would depend on the individual projects that are proposed. Visual impacts on historic structures could be significant due to the lack of specific guidelines for directing and evaluating the design of new projects that are adjacent to Landmark Buildings, Significant Structures or Contributing Structures.





*View Corridors.* This alternative represents a general increase in development density over the Base Alternative. Building heights would be allowed to increase (above the heights allowed in the Base Alternative) by one story in the outlying buffer areas and by two stories within the Downtown core area.

The allowable height along almost all of University Avenue would be four stories or 60 feet. The visual effect of this alternative on the University Avenue view corridor would not be significant due to the large width of University Avenue, the continuous plantings of mature tulip trees, and the number of structures along University Avenue which currently are four stories or greater. A 75 foot high structure could be developed on Parcel 2 on the northeast corner of University and Walnut Street. This development height would match the scale of the tall buildings located at the eastern end of the view corridor for the motorist or pedestrian leaving the U.C. campus and entering the Downtown.

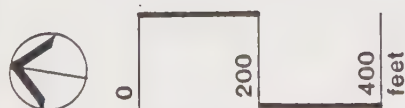
Because view corridors located within the core area could experience a general increase in development intensity, structures 87 feet high could be located in areas where the surrounding structures are less than 40 feet high. New development along Addison Street, east of Milvia, could stand more than four stories above the surrounding structures. While this level of development would not affect east and west views of the Berkeley Hills and the San Francisco Bay, the higher buildings would reduce the width of the sightlines and create more of a tunnel effect. This would be especially true for Addison Street due to its narrow width, lack of street trees and low-rise buildings.





-  4 Stories or 60 Feet
-  5 Stories or 75 Feet
-  7 Stories or 87 Feet
-  Development Site

Refer to Figure 14 for Existing Building Height



**Figure 30**  
**Height Limits for**  
**Maximum Bonus Alternative**

Development heights along Oxford Street and Fulton Street would be allowed to reach 75 feet. As with the No Action Alternative and the Base Alternative, an "urban wall" of structures could replace the open expanse currently provided by surface parking areas. This development would contrast significantly with the landscaped areas of the U.C. campus on the eastern side of the Oxford/Fulton corridor.

Proposed development height south and west of the core area would be limited to 60 feet or four stories. Sites with development potential there are located next to structures as high as three stories. In two cases the potential development sites (Parcels No. 10 and 12) are adjacent to structures which are between four and six stories. This allowable level of new development would not significantly affect the character of the existing view corridors.

Views from the Berkeley Hills and adjacent neighborhoods would not be significantly affected by this alternative. From the Berkeley Hills, the building mass in the Downtown core area would increase and would accentuate the existing urban peak. New development in the other buffer areas would be difficult to discern from the Berkeley Hills or adjacent neighborhoods. The general level of development proposed by this alternative would visually reinforce the existing visual sense of downtown Berkeley.

*Pedestrian Environment.* Impacts on the pedestrian environment in terms of solar access would be more significant than the Base Alternative impacts due to the greater allowable heights. As with the Base Alternative, shading impacts would be less significant for the areas outside of the center of Downtown where height limits would be more restricted. Shading impacts could be most significant for the Oxford/Fulton Street corridor, along Addison Street and on Shattuck Avenue just west of Parcels No. 15 and 20.

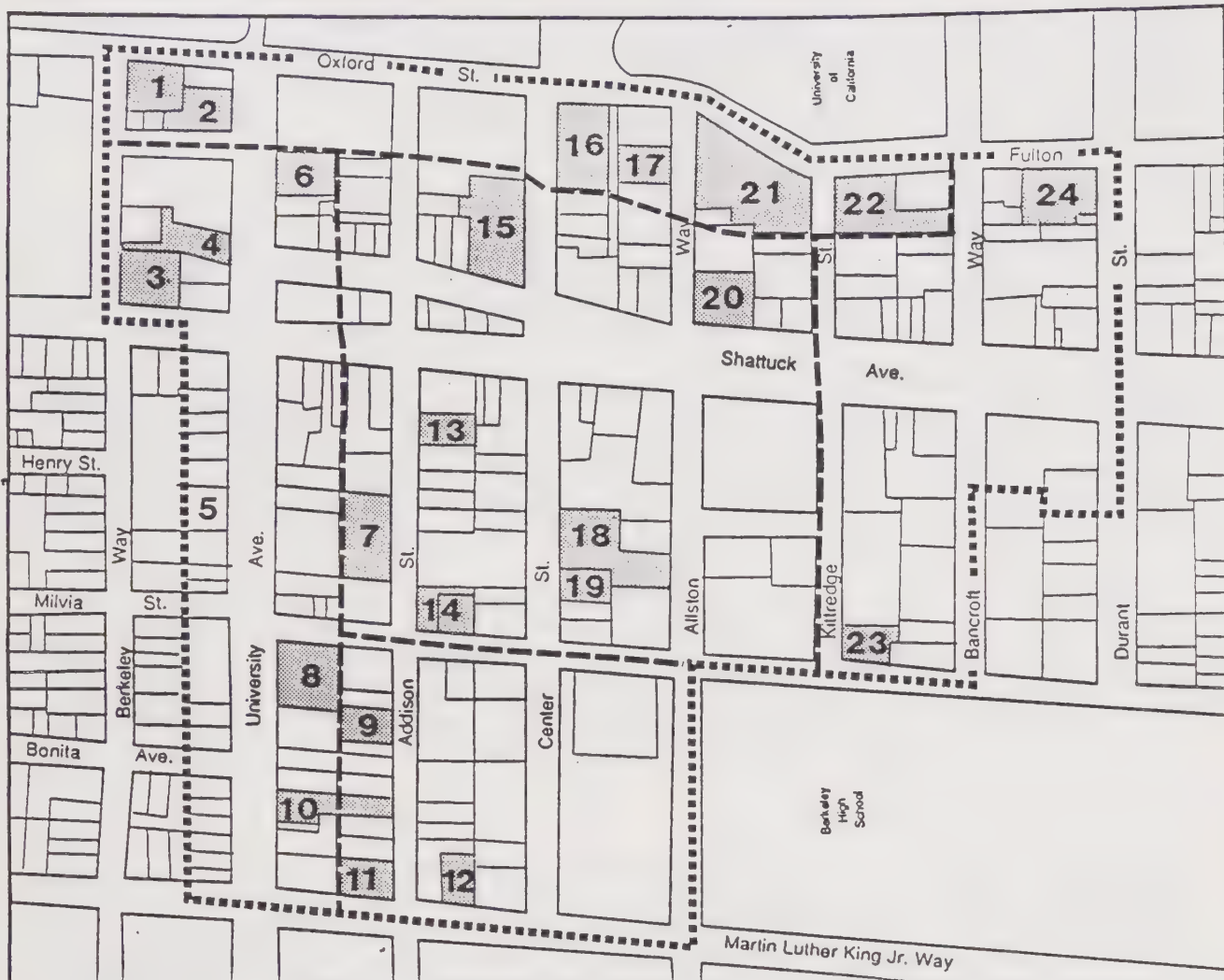
#### Impacts Specific to Alternative 4.

*Historic Structures.* In terms of allowable heights, this alternative would have the least impact upon historic structures in comparison with the other three alternatives. A standard height limit of three stories or 40 feet would be allowed in all of Downtown Berkeley (see Figure 31). This lower maximum height would tend to limit new structures to those more compatible with a number of Landmark Buildings, Significant Structures and Contributing Structures.

As with all of the other alternatives, building design compatibility would have to be determined at the time that individual projects are proposed. Without specific guidelines to direct or evaluate the design of new projects that are adjacent to Landmark Buildings, visual impacts on such structures could be significant.

*View Corridors.* With the allowable height limit of 40 feet or three stories, no significant impacts would occur on existing view corridors within the study area. This height would be similar to many of the existing Downtown buildings. Views of the horizon and sky views would remain very similar to what they are currently and views of the Downtown from surrounding neighborhoods and the Berkeley Hills would remain essentially unchanged.

*Pedestrian Environment.* Of all the alternatives, this one would result in the fewest impacts on pedestrians, especially in terms of solar access. Shading from 40-foot buildings would not significantly change the existing shading conditions of the Downtown. The only large area that may experience a significant change would be along the Oxford/Fulton Street corridor where a number of undeveloped parking areas currently exist.



 3 Stories or 40 Feet

 10 Development Site

Refer to Figure 14 for Existing Building Height

**Figure 31**  
**Height Limits for Low Intensity**  
**Development Alternative**





### Public Improvements or Program Mitigation Measures Included in the Plan

The emphasis of the *Plan* on the preservation of historic qualities of Downtown Berkeley points out the need to strengthen the language of the Design Review Guidelines in terms of historic structures. Specific recommendations have been made in the *Downtown Plan* for the development of an Historic Overlay Zone which would apply to parcels along the Shattuck Avenue corridor and to other parcels on a case-by-case basis. This overlay zone would constitute a new section of the Design Review Ordinance.

The *Plan* includes a list of specific criteria for Downtown Design Review which would mitigate a number of potential impacts. These have been identified for use in the Historic Overlay Zone. However, the same criteria could apply to review of all Downtown projects.

The criteria and recommendations from Section 2.2 of the *Plan* which would be most important for mitigating potential visual quality impacts of any of the alternatives are summarized below:

- ☐ Requirement for visual connection between public and private spaces by use of clear ground-floor windows and careful design of entrances;
- ☐ Recommendation that buildings be stepped back after three or four stories to respect the existing streetwall;
- ☐ Requirement that new development maintain the continuity of existing streetscape with appropriate window patterns, zero lot line development, entrances and paving;
- ☐ Requirement for new development projects to include street trees as specified by a Downtown tree planting plan;
- ☐ Requirement for new construction to incorporate public open spaces where feasible, functional and not likely to detract from streetscape continuity;
- ☐ Encouragement of parking facilities in buffer areas to improve core area pedestrian environment;
- ☐ Requirement for new construction applicants to submit sun/shade diagrams;
- ☐ Recommendation that new construction include features such as awnings, canopies and recessed entries to protect pedestrians from inclement weather;
- ☐ Recommendation that buildings be faced with natural brick, pressed brick, concrete, stucco, stone (marble, granite), tile, or terra cotta; and
- ☐ Prohibition of demolition of any historic structure documented in BAHA Historic Survey and requirement of Landmarks Preservation Commission review of demolition of buildings greater than 40 years old, as specified in the Landmarks Preservation Ordinance.

While many of the above recommendations would mitigate potential adverse visual impacts of new development and/or reconstruction in Downtown Berkeley, it is important that each of these recommendations be incorporated into the City's Zoning Ordinance or into the Design Review Guidelines. The City should revise the Design Review Guidelines to include specific recommendations applying to projects within the Downtown, especially as related to historic buildings. Otherwise, the City would face the risk that general recommendations might not be adhered to during the review of future specific projects.

Many of the listed items in Section 2.2 of the *Plan* use the word "require" for design criteria that are very subjective. For example, the City would have a very difficult time "requiring" appropriate window patterns, entrances and paving to maintain the continuity of the existing streetscape, as the achievement of this standard is a determination that is often debatable. These references would more appropriately be called "recommendations". All of the criteria which are listed in the *Plan* as "requirements" will only be so if the specific language is incorporated into the Zoning Ordinance. This could be done for the specific zoning categories which apply to the Downtown. For example, the requirement for stepping back buildings after three or four stories should be incorporated into the zoning language by specifications regarding building bulk. For those which are more appropriately "guidelines" for building designers, specific language changes in the Design Review Guidelines should be made or implemented.

Some of the recommendations listed above could also be strengthened to ensure that the City's goals are met.

For example, the incorporation of open spaces should be specifically inserted into the Zoning Ordinance. Developers could be required to provide one square foot of open space for each 50 square feet of new development. If this provision of open space cannot be met onsite, the developer could contribute an in-lieu fee to a City fund similarly to what is often done for parking requirements. The City could then use such funds for the development of centralized open spaces within Downtown Berkeley.

As another example, the required sun/shade diagrams should be included in the Design Review Ordinance and should require such a diagram for specific times of the day and specific seasons. The City should also make the Downtown tree planting plan a top priority so that new developments can contribute towards street tree plantings that are consistent along view corridors. Without such a plan, the City may find that inappropriate trees are proposed and planted.

Specific guidelines for Downtown subareas are also included in the *Plan* in Section 2.3. These apply to Shattuck Avenue, the Oxford Edge, Civic Center/West Buffer, Entry Corridors, and Center Street. As with the above recommendations/requirements, the Subareas guidelines should be incorporated into the City's Zoning Ordinance or the Design Review Guidelines. Any guidelines related to building setbacks and height limits should be incorporated into the zoning ordinance language for the specific zones within Downtown Berkeley. Other more generalized guidelines should be incorporated into the Design Review Guidelines. The most appropriate recommendations which would mitigate potentially adverse visual impacts are summarized below:



- ☐ Maintain three-to-five story streetwall along Shattuck Avenue;
- ☐ Require development at Oxford Street intersections to provide setbacks for public open space;
- ☐ Define major Downtown entry points and key intersections with specific land use, design features and building guidelines; and
- ☐ Implement a design for Center Street to unite the University and Downtown.

#### **Additional Mitigation Measures Recommended by this EIR**

##### **Remaining Impact 1:** Potential for Shortfall in Implementation of Overly General Policies/Programs [⊙]

**Mitigation Measure:** While the purpose of this EIR is not to critique the *Plan's* effectiveness or rewrite its programs, several aspects of the *Plan*, as they affect design and visual resources, may not serve their intended mitigatory function unless they are clarified or strengthened. The following topics were discussed above and are summarized here as recommendations:

- ☐ Specific criteria for design review in the Historic Overlay Zone should be applied to all Downtown development.
- ☐ The Zoning Ordinance could incorporate open space requirements.
- ☐ The required sun/shade diagrams should be incorporated into the Design Review Ordinance.
- ☐ The requirements/recommendations applicable to subareas should be incorporated into the Zoning Ordinance or Design Review Ordinance. If however, implementation of the *Downtown Plan* is accomplished by way of a Specific Plan, a recently adopted Specific Plan Zoning District would be used to apply the *Plan's* standards.
- ☐ Downtown entry points and key intersections should be identified.
- ☐ Before "implementing" a design plan for Center Street, the City should "prepare" such a plan.

##### **Remaining Impact 2:** Overall Impact of Allowable Height Limits [⊙]

**Mitigation Measure:** Of all four alternatives, Alternative 2 is the one which would allow maximum height limits compatible with existing structures and at the same time not create adverse visual impacts in terms of view corridors, historic structures or the pedestrian environment. For this reason, only minor revisions to the allowable height limits of Alternative 2 are discussed below.

However, as part of the recommended revisions to the Design Review Guidelines for the assessment of impacts to historic buildings, specific language should be included to address potential impacts of incompatible heights. For example, if a five-story new building is proposed adjacent to a designated two-story Landmark Building, architectural features should be recommended to minimize the height contrast. Window detailing, cornice lines and other elements may be recommended in the Guidelines to address this potential impact.



Remaining Impact 3: Potential Impacts on Oxford/Fulton View Corridor [⊙]

Mitigation Measure: To address specifically the sensitivity of the Oxford/Fulton view corridor, the City should establish strict height and bulk requirements in the Zoning Ordinance. Of the four alternatives, Alternative 4 would allow the best maximum height limit (40 feet) for the Oxford/Fulton corridor. However, it is recommended that Alternative 2 be revised to allow a maximum height limit of 40 feet for Parcels 16 and 17 which are north of Allston Way on Fulton Street. These two parcels are located at a major connection point between the University and the Downtown.

The City should incorporate zoning language which requires that above two or three stories, any buildings along the Oxford/Fulton Street corridor should be set back a specific amount. Even with setbacks, the maximum allowable height limit should not exceed 50 feet, as has been proposed in the *Downtown Plan* for Alternative 2 (which assumes no use of bonuses). Such setbacks would create a more smooth visual transition between the University campus and the Downtown. These setbacks should be in addition to the open space/landscaping recommended in the *Plan* and addressed above. Setbacks and landscaping would be especially important for any parking structures along the Oxford/Fulton view corridor due to the lack of building detail generally associated with such structures.

Remaining Impact 4: Potential Impacts to Addison Street View Corridor [Ø]

Mitigation Measure: Due to the narrowness of Addison Street and the predominance of low-rise structures, the zoning language for the allowable five-story (65 feet) structures for Addison Street parcels east of Milvia Street should incorporate strict language for building setbacks above two or three stories. Such setbacks would maintain a generally open visual corridor along Addison Street and would be compatible with the existing building pattern.

The City of Berkeley should also complete a street tree plan for the Addison Street corridor which has many blocks which are devoid of any street trees. Street tree plantings are also addressed below.

Remaining Impact 5: Potential Impacts to the Pedestrian Environment as Related to Solar Access [Ø]

Mitigation Measures: The following are measures which could be used to maximize solar access:

- ☐ The Zoning Ordinance could establish height limits as set by Alternative 4 which has the lowest allowable height limits (40 feet for all of Downtown);
- ☐ Alternatively, if the height limits of Alternative 2 are adopted, setbacks should be required at two or three stories, especially for those projects on the south sides of east-west streets;
- ☐ As mentioned above, the *Plan* recommends the submittal of sun/shade diagrams for new projects as part of the design review process. At a minimum, these should be completed for the noontime hour for 21 December and 21 September. If significant shading effects are found to be created by the project at noon on 21 September, design changes should be recommended such as increased setbacks or lower heights. Such changes would be especially relevant for areas of high pedestrian activity such as along Shattuck Avenue and east of Shattuck Avenue along corridors that connect the Downtown with U.C. Berkeley.

- ❑ The Downtown street tree plan should consider shading effects of various recommended tree species. While many areas of the Downtown need to have street trees added, the City should consider species that are deciduous or that are of a relatively small size and thus would not create significant shading.

Remaining Impact 6: Potential Impacts on the Pedestrian Environment  
in Terms of Visual Features along Sidewalks  
and Opportunities for New Pedestrian Linkages [⊙]

Mitigation Measures: The *Plan* would not have specific impacts on visual features of the Downtown sidewalk areas. However, in order to further key aspects of the *Plan's* goals, it could incorporate more specific recommendations for improving the overall quality of the sidewalks and pedestrian linkages between blocks. Some measures could be implemented by individual developers and others may be more appropriately implemented by the City Parks and Recreation Department or Public Works Department. The following are recommendations which could be incorporated into the *Downtown Plan* goals and objectives:

- ❑ A design plan should be prepared by City staff or private consultant which recommends specific coordinated features for Downtown sidewalk areas such as sitting areas, bench designs, garbage receptacles, newspaper rack design and location, and lighting fixtures;
- ❑ The City should consider adopting an ordinance related to the design, size and placement of newsracks as has been done for Salt Lake City (see Appendix C for a copy of this ordinance);
- ❑ The incorporation of fountains in appropriate locations should be considered in the design of public outdoor spaces, especially as a noise "buffer" between pedestrian areas and traffic lanes (see discussion below regarding uncovering Strawberry Creek).
- ❑ Opportunities for mid-block pedestrian linkages should be mapped and incorporated into the *Downtown Plan*. When new projects are proposed for these locations, such linkages should be encouraged as a way of removing pedestrians from auto-related corridors. Retail uses with ground floor windows should be encouraged along such pedestrian linkages to enliven the pedestrian environment.

Remaining Impact 7: Continuation of Urban Development and Increase in Population  
Given the Limited Provision of Open Space Areas  
in Downtown Berkeley [⊙]

Mitigation Measure: As can be seen in Figure 24, Downtown Berkeley is limited in outdoor landscaped areas, especially in central locations of the Downtown other than along Shattuck Avenue. A number of recommendations are listed below which could be drawn from as additional goals and/or objectives in order to insure that the *Plan's* goals for a pedestrian orientation are achieved.

The City of Berkeley should identify areas of the Downtown where new public outdoor areas would be most appropriate. The following are possible open space areas that could be considered and identified in the *Downtown Plan*:



- Small sidewalk open space areas could be provided along University Avenue, Addison Street, Center Street and Allston Street east of Shattuck Avenue where outdoor sitting areas would provide a linkage between Downtown and the University campus.
- Potential opportunities exist in closing off small connecting streets such as Harold Way (between Allston Way and Kittredge Street) and Walnut Street (between Berkeley Way and University Avenue) to convert publicly-owned rights-of way to small parks. Retail uses at the edges of any such park spaces should be encouraged.
- New parking structures should incorporate rooftop public outdoor areas where solar access and long distance views would be available.
- If Strawberry Creek is brought to the surface, ample area should be provided as a landscaped pedestrian corridor along the creek. This type of open space would meet objectives of providing open space areas as well as providing linkage between the Downtown and the University. Center Street may be an appropriate location for the rerouting of Strawberry Creek due to its direct connection with the University, its ample width, and need for street trees and landscape features which do not currently exist.

As mentioned above, the City Zoning Ordinance should include specific language for new developments contributing to open space. This could be done either on a square footage requirement or by payment of in-lieu fees to a fund which could be used by the City for acquisition and maintenance of park areas.

If the Bank of America (Parcel No. 15) building is demolished, the City should ensure that a southwest-facing outdoor sitting area is incorporated into the design of the project to demolish the heavily-used outdoor corner area that now exists. Such demolition is especially important if other new outdoor sitting areas are not developed in the same general vicinity.



## TRANSPORTATION: TRAFFIC, PARKING, TRANSIT AND PEDESTRIANS

*Analysis of transportation impacts has been undertaken by Barton-Aschman Associates, Inc., Berkeley, California. A separate technical background report describes existing conditions, analyzes potential impacts and recommends mitigation measures. That report is available for review at the City of Berkeley, Planning and Community Development Department.*

*The following discussion presents a summary of the findings in the technical background report, emphasizing key aspects of the Plan as it could affect traffic circulation, parking, transit and pedestrians.*

### **Existing Setting**

**Existing Roadway Network.** Downtown Berkeley is located approximately 1.7 miles east of Interstate 80 (I-80) which provides access to San Francisco and San Mateo Counties to the west, Contra Costa County and the San Joaquin Valley to the east, Oakland and cities of southern Alameda County and Santa Clara County to the south via I-880, and Pleasanton and eastern Alameda County to the east via I-580. Major approach corridors providing access to the Downtown include University Avenue, Shattuck Avenue, Martin Luther King Jr. Way, Ashby Avenue, Telegraph Avenue, College Avenue and Piedmont/Waring Avenue. Figure 1 (p. 22) shows the location of the Downtown in the context of the regional road network.

Each of the entry corridors into Downtown has one or more congested locations during peak periods. There are four main entry corridors: University Avenue from the west, Martin Luther King Jr. Way from the south, Shattuck Avenue from the south and the Bancroft/Durant one-way couplet from the east. All are designed to carry high volumes of traffic. All pass generally through non-residential areas.

The most serious congestion points along these corridors are:

- ☐ University Avenue between I-80 and Sixth Street;
- ☐ Southern Shattuck Avenue at Ashby Street;
- ☐ College Avenue at Ashby Street; and
- ☐ Telegraph Avenue between Dwight Way and Bancroft Way.<sup>24</sup>

Automobile traffic in the Downtown competes for space on streets which are heavily used by transit vehicles, pedestrians, bicyclists, disabled persons in wheelchairs and delivery vehicles. All streets in the network are used for Downtown destinations, but some are also used as through streets for cross-town destinations or for travel to adjoining cities.

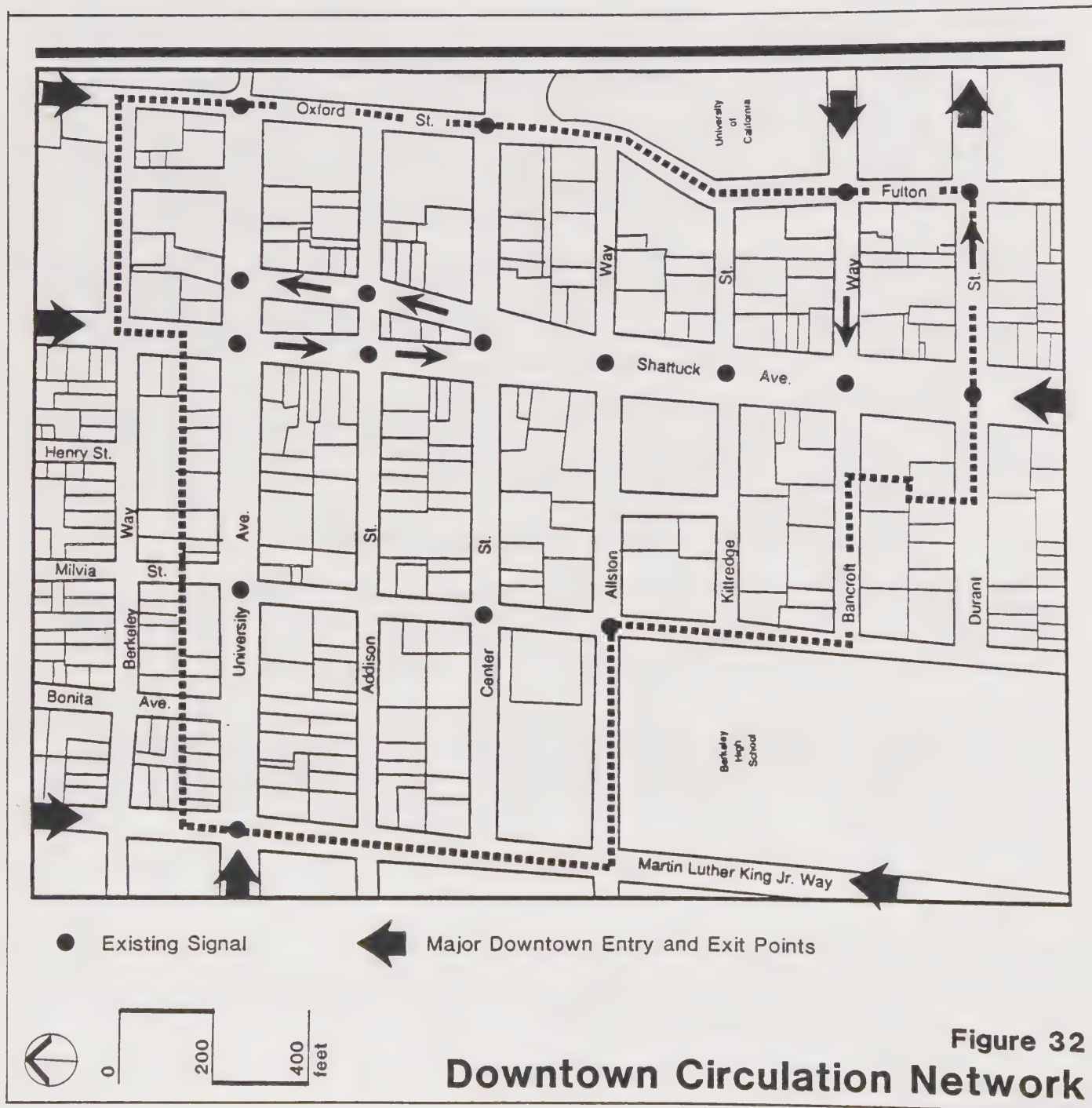
The study area street system is a grid of four north-south and eight east-west streets. Oxford Street/Fulton Street, Shattuck Avenue, Milvia Street and Martin Luther King Jr. Way, are the major north-south routes, linking the Downtown with points in North and South Berkeley. University Avenue is the major east-west arterial providing access to West Berkeley and I-80.

---

<sup>24</sup> *Conditions Assessment and Strategies: Downtown Transportation Study*, Cambridge Systematics, August 1986. This study provided a substantial portion of the information in the *Existing Setting* subsection herein.

All major streets (Shattuck, Oxford, University, Martin Luther King Jr.) have either two or three lanes in each direction, depending on location. Milvia Street and the seven other east-west streets (excluding University Avenue) generally have one lane in each direction, with the exception of some portions of Milvia Street, where there are two lanes. All street segments in the network allow two-way traffic, with the exception of the one-way pair of Bancroft Way and Durant Avenue east of Shattuck Avenue. There are 23 intersections in the study area of which 16 are signalized. Unsignalized intersections are controlled by stop signs on the minor street.

Figure 32 shows the existing Downtown circulation network, the main entry/exit points to the Downtown, locations of traffic signals and directions of one-way streets.



**Figure 32**  
**Downtown Circulation Network**

Source: City of Berkeley, 1986 Downtown Transportation Study

\* 1986 Counts  
[All others: 1983 counts]

Figure 33  
Average Daily Traffic

Berkeley Downtown Plan EIR



Existing Levels of Service. Signalized intersection operations are described using Level of Service (LOS) categories "A" through "F", which represent the extent to which vehicles would be delayed when using the intersection. Delay is a complex measure and is dependent on a number of variables including the quality of signal progression, the cycle length, the green-time ratio and the volume-to-capacity ratio for the approach in question. A description of the different levels of service and their relation to delay is presented in Table 17.

Table 17

Signalized Intersection Level of Service Definitions

<u>Level of Service</u>	<u>Interpretation</u>	<u>Stopped Delay Per Vehicle (seconds)</u>
A	Progression is extremely favorable, and most arrive during the green Phase.	<5.0 vehicles
B	Good progression. More vehicles stop than for LOS A, causing higher levels of average delay.	5.1 to 15.0
C	High delays resulting from fair progression. Individual cycle failures may begin to appear in this level. Some vehicles still pass through the intersection without stopping.	15.1 to 25.0
D	Congestion becomes more noticeable. Longer delays are noticeable and individual cycle failures increase and become noticeable.	25.1 to 40.0
E	High delay generally indicates poor progression and frequent individual cycle failures.	40.1 to 60.0
F	Oversaturation occurs (i.e., arrival flow rates exceed intersection capacity). Cycle failures are common.	>60.0

Note: Cycle failure is meant by traffic engineers to imply a condition in which one or more vehicles are unable to pass through an intersection (after having arrived during the red phase) before the completion of one cycle. Another way of describing this condition would be to say that the intersection does not fully "clear" on each cycle.

Source: Barton-Aschman Associates, Inc.

Generally, a level of service of E or F is considered unacceptable for motorists and may represent a hindrance to traffic operation in the network. Measure S, an advisory initiative passed by the citizens of Berkeley directed the City to adopt a LOS standard of D for intersection operation.

Table 18 presents the results of the level of service analyses for the sixteen key signalized intersections in the study area. The overall level of service for all signalized intersections is D or better. The following three signalized intersections have an unsatisfactory level of service (E or F) for at least one movement:

- Shattuck Square (Shattuck northbound)/University Avenue
- Martin Luther King Jr. Way/University Avenue
- Shattuck Avenue/Durant Avenue

There are two Shattuck/University intersections. The first is formed by University and Shattuck Square (one-way northbound and hereafter referred to as Shattuck northbound) and the second is formed by University and Shattuck Avenue (southbound south of University and hereafter referred to as Shattuck southbound). Field observation of these two intersections suggests that they actually operate at a worse LOS (in the D or E category) than the capacity calculations would indicate (B and D). This is because the two intersections are so close together that they interact on each other's operation. The capacity calculation method being used cannot take into account the interrelationship.

Table 18

Existing PM Peak Hour Levels of Service  
at Signalized Intersections

<u>Intersection</u>	<u>Overall LOS</u>	<u>Movements with LOS D or Worse</u>
Oxford and University	B	NB Left = D
Shattuck (NB) and University	D <sup>a</sup>	NB Right = F
Shattuck (SB) and University	B <sup>a</sup>	
Milvia and University	B	
Martin Luther King and University	C	NB Left = F
Shattuck (NB) and Addison	B	
Shattuck (SB) and Addison	B	
Oxford and Center	B	
Shattuck and Center	B	
Milvia and Center	B	
Shattuck and Allston	B	EB All = D
Milvia and Allston	B	
Martin Luther King and Allston	B	
Shattuck and Kittredge	B	
Oxford and Bancroft	C	
Shattuck and Bancroft	B	
Fulton and Durant	B	
Shattuck and Durant	B	SB Left = F

<sup>a</sup> Field observations suggest that these intersections are operating at LOS D/E.

Note: Existing counts updated as part of this EIR. Shattuck NB refers to Shattuck Square, the northbound one-way portion of Shattuck Avenue between Center and Addison Streets. Shattuck SB refers to the southbound one-way portion of Shattuck between Center and Addison Streets.

Source: Barton-Aschman Associates, Inc.

At the seven unsignalized intersections, all through movements on, and turning movements from, major north/south streets are presently operating at an LOS of C or better, while all through movements on, and left turning movements from, minor east/west streets are operating between D and F during the PM peak commute period. Figure 34 shows these existing levels of service at the unsignalized intersections.

The poor levels of service for the minor cross streets do not represent significant impacts for other legs of the system, as the lack of a signal gives priority to the major street and discourages use of the minor street. If all these intersections were signalized, all could be operating at LOS C or better. However, this would encourage use of the minor streets, increasing traffic volumes there. The installation of signals at these locations would also increase delays to through traffic on the major streets and make it more difficult to coordinate signals along the major street.

Existing Safety Concerns. The primary problem area for traffic safety is along Center Street. Traffic safety problems are associated with delivery trucks and buses that are double parked because of autos parking at bus stops and loading zones.

Four intersections were identified as having significant safety problems in 1985:

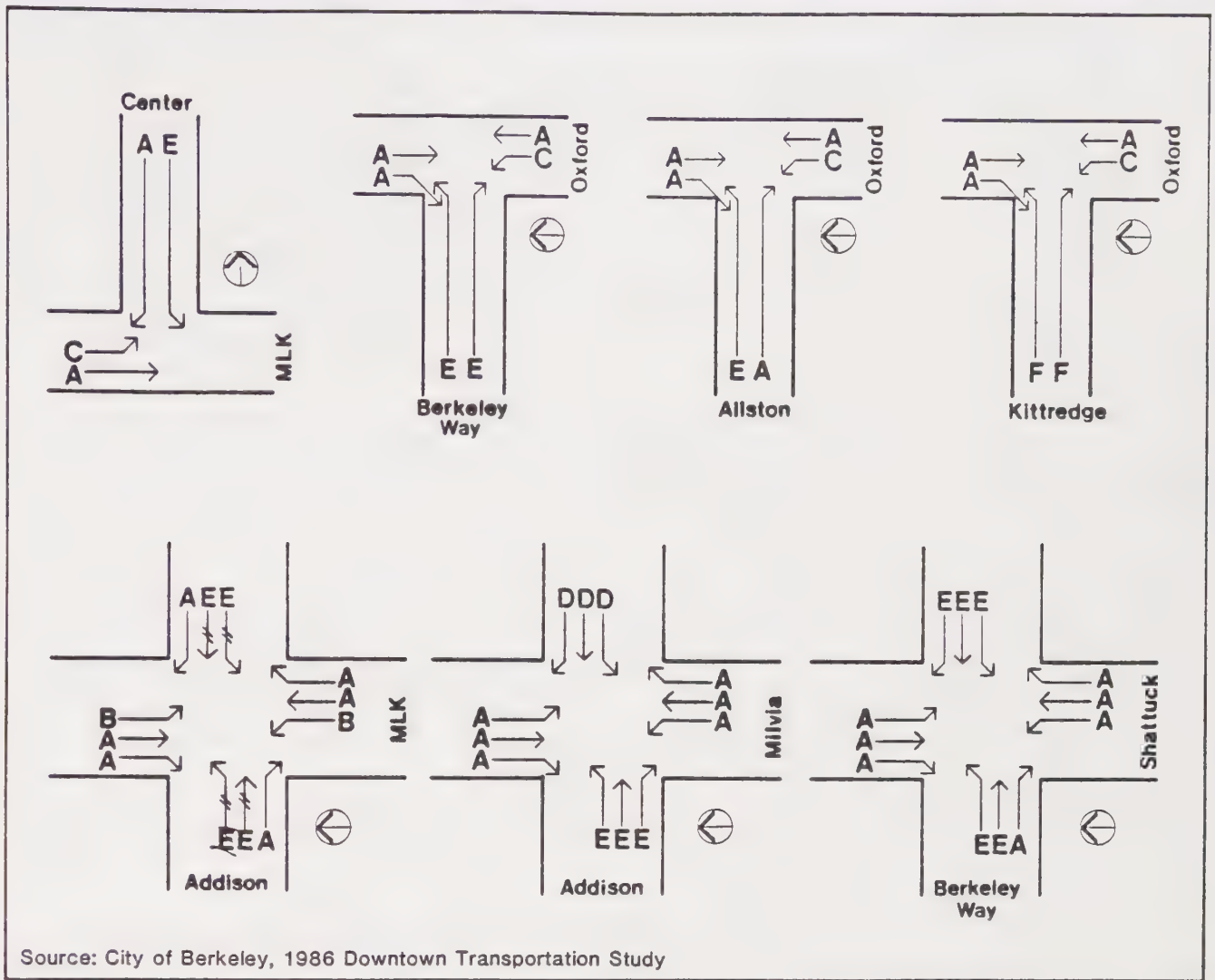
- ☐ University Avenue/Shattuck Avenue
- ☐ University Avenue/Martin Luther King, Jr. Way
- ☐ University Avenue/Oxford Street
- ☐ Fulton Street/Durant Avenue

Each of these intersections had more than ten accidents in 1985 and an accident rate of more than one per million entering vehicles.

Current Travel Patterns. The transportation technical background report compiled several interesting characteristics of Downtown travel patterns:

- ☐ The estimated number of person trips made to the Downtown for work purposes in 1985 was 11,000, while the number of non-work person trips was 36,000 in 1977 (the only year for which data is available). These non-work trips exclude those who entered by walking or on bike, hereafter referred to as "walk" and "bike" trips.
- ☐ Approximately 40 percent of work trips are made by single occupant vehicle (SOV), while 10-15 percent are shared-ride trips, 35 percent are transit trips and 10-15 percent are walk and bike trips.
- ☐ The Downtown has a high percentage of short trips with 76 percent under ten miles and 67 percent under four miles.
- ☐ Approximately 52 percent of the work trips originate from Berkeley, Albany and North Oakland.
- ☐ The modal split for non-work trips (excluding walk and bike trips) into Downtown indicates that 15 percent are by transit. The remaining 31,000 auto person trips are made in 17,000 autos, for an average auto occupancy of 1.8. Most of the non-work trips (82 percent) originated in Berkeley, Albany or Oakland.





← Indicates a Legally Prohibited Movement

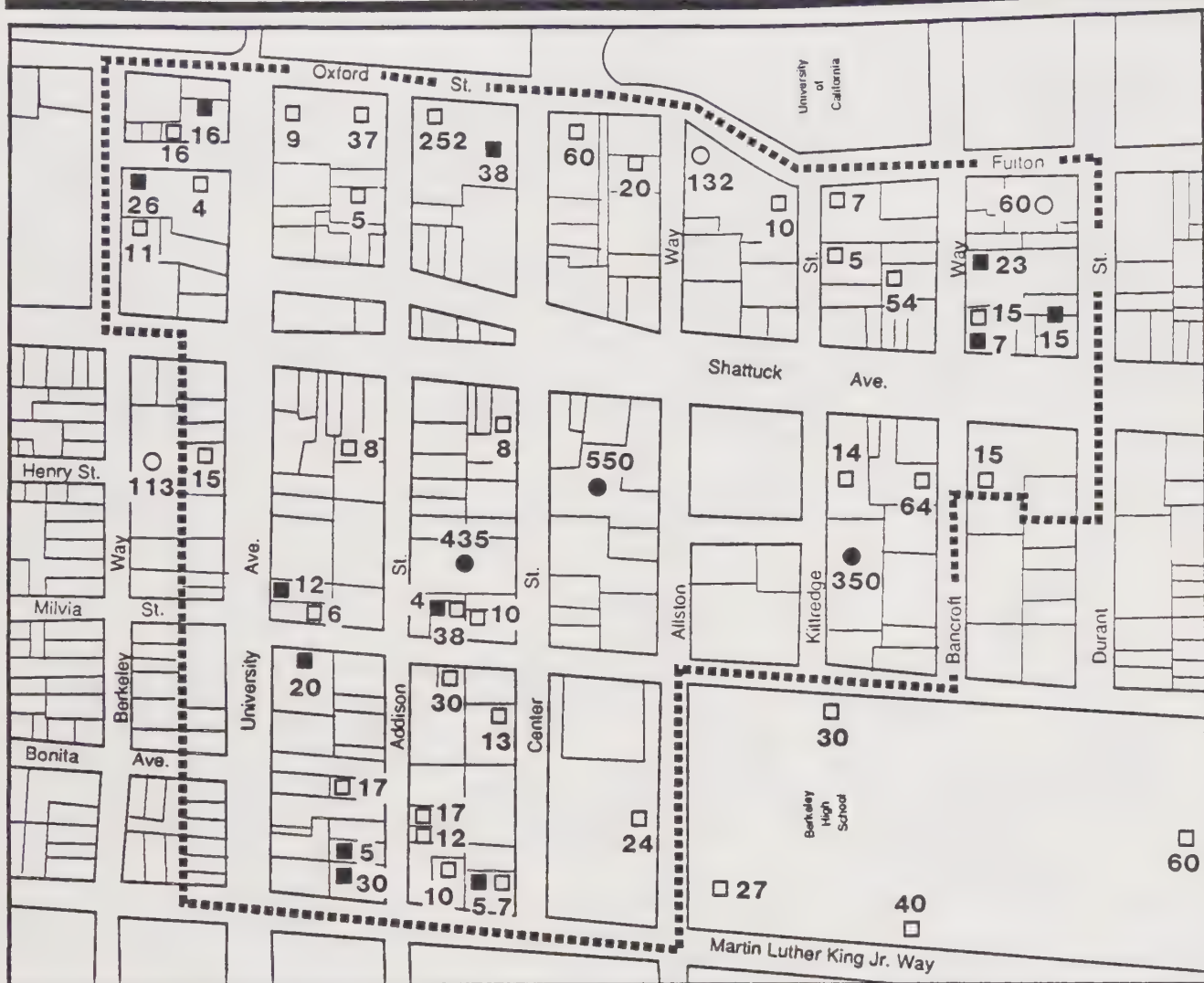
**Figure 34**  
**Existing LOS at Unsignalized**  
**Intersections, PM Peak**

Berkeley Downtown Plan EIR

**Existing Parking Conditions.** An inventory of all off-street and on-street parking facilities was conducted in May 1986. This inventory found a total of 2,636 off-street parking spaces and 794 legal on-street parking spaces, for a total of 3,430 spaces. Figure 35 shows the location of the off-street parking facilities.<sup>25</sup>

Approximately 62 percent (1,640) of the off-street spaces are public, with 57 percent of those spaces rented on a monthly basis to all-day parkers. Of the 38 percent (996) parking spaces reserved for private use, 18 percent are reserved for customers; the remaining spaces are for employees.

<sup>25</sup> See Footnote 24.



**Figure 35**  
**Existing Downtown**  
**Parking Facilities**

Berkeley Downtown Plan EIR

Most of the legal on-street spaces in the study area are metered (763 of the 794 spaces). About two-thirds of all spaces are at one-hour meters; twenty percent are in green zones with twenty-four or thirty minute limits and eleven percent are at two-hour meters. Rates in on-street meters are \$0.60 per hour.

Excluded from these numbers are special spaces such as those for cars with handicapped plates, commercial loading (yellow zones), passenger loading (white zones, primarily in front of theaters) and taxi stands.

Public parking occupancy surveys indicate that both on-street and off-street parking facilities were at maximum practical capacity at midday and close to it in the morning hours. On-street parking occupancy peaks at about 91 percent between 1:00 PM and 2:00 PM with an average of 75-85 percent of the spaces occupied between 11:00 AM and 5:00 PM. Off-street spaces were found to be about 77 percent occupied in the morning and between 83 percent and 86 percent occupied in the afternoon.

Abuse of parking restrictions in specially-designated areas (e.g., red and yellow curbs) has been identified by the City's planning staff as a concern. Such abuse impedes traffic flow by restricting turns, blocking bus stops and forcing delivery trucks to double park, restricting through traffic flow.

Parking occupancy in adjacent neighborhoods has also been surveyed. It is estimated that approximately 1,110 Downtown employee drivers park in the residential areas to the north, west and south of the Downtown.<sup>26</sup> This heavy use of residential streets combined with the demands in the Downtown indicates a shortage of both short-term and long-term parking supplies.

The City of Berkeley has an existing Residential Permit Parking (RPP) program which allows unlimited resident parking (with permits) on designated streets but imposes parking restrictions on non-residents. This program was established in response to the complaints of residents that they were unable to find parking in their neighborhood because of commuters. The area immediately west of the Downtown is already designated for inclusion in the RPP program, restricting parking to two hours only for non-residents.<sup>27</sup>

The City is in the process of expanding the RPP program to other neighborhoods.<sup>28</sup> Current RPP boundaries were adopted by the Berkeley City Council on 6 February 1989 and are shown in Figure 36.

The implementation of the RPP "Doughnut"<sup>29</sup> plan would displace long-term non-resident parkers now taking advantage of the free, relatively close parking in the neighborhoods. The implementation of the "Doughnut" would increase demands for parking in Downtown parking facilities. A phased implementation program is proposed with the north campus, Panoramic and campus zones implemented first, followed by the south campus areas. Other areas would follow. Implementation is projected to begin in the fall of 1989 and continue into 1990.

Possible reactions by parkers displaced by the RPP program would be for them to: (1) continue to drive and park outside the RPP zone and walk in; (2) park in the Downtown in off-street facilities (assuming availability); (3) change mode to transit; (4) move every two-hours; or (5) park outside the Downtown and complete their trip on transit. It has been estimated that the full implementation of the RPP plan would cause between 670 and 890 Downtown parkers to continue to drive and walk into the Downtown (up to 20 minutes) and 190 to switch to transit. The remaining 35 to 260 would attempt to park in the Downtown. This would require short term parkers to shift to residential areas as they would be displaced by long term parkers due to the shortage of parking in the Downtown and the fact that no mitigations have been included in the RPP program that would increase the number of Downtown parking spaces.

<sup>26</sup> *Assessment of Land Use Scenarios and Transportation Strategies: Downtown Transportation Study*, Cambridge Systematics, November 1986.

<sup>27</sup> *Berkeley Downtown Plan*, February 1988.

<sup>28</sup> *City of Berkeley Residential Permit Parking Program Draft EIR*, ESA, September 1988.

<sup>29</sup> The geographical area covered by the RPP program has been given this nickname by local residents and participants in its design.





Prepared by the City of Berkeley, Planning & Community Development Department, January 1989

Adoped by City Council, 2 February 1989

- Existing Permit Areas
- Newly Designated Permit Parking Areas



**Figure 36**  
**Residential Permit Parking Areas**

Mitigation measures have been adopted that include providing on-street car pool parking adjacent to the Downtown as well as additional support to Berkeley TRiP. The City is also continuing to study the feasibility of a satellite parking lot served by a shuttle or along a transit route.

Current Transit Conditions. The Downtown core is relatively well served by public transit, with frequent and direct service by AC Transit, BART and the University sponsored Campus Shuttle. There is a taxicab stand by the BART station and taxi service is available on call-as-needed basis. The local ridesharing office, Berkeley TRiP, is located on Center Street in the Downtown core.

AC Transit. AC Transit has eleven bus lines which stop in Downtown Berkeley (primarily near BART at Center Street and Shattuck Avenue). These routes provide direct service to Berkeley, Oakland, Richmond, Kensington, El Cerrito, San Francisco, Emeryville and Albany.

Frequency of service generally varies from 4 to 20 minutes during the AM and PM commute periods; midday (9 AM to 4 PM) service generally ranges from 7 to 30 minutes. The most recent PM peak-period load factors (defined as the number of passengers per seat) for AC Transit lines serving the Downtown range from 0.19 to 0.81. AC Transit has a service objective of a maximum peak-period load factor of 1.25. Table 19 gives the latest available load factors for AC Transit lines at cordon stations around the Downtown area during the PM peak period.

Table 19

AC Transit Weekday Load Factors for Peak Period Routes  
Serving the Downtown Area<sup>a</sup>

<u>Cordon Station</u>	<u>Route</u>	<u>Capacity (Seats)</u>	<u>Passengers</u>	<u>Load Factor<sup>b</sup></u>
Warring at Parker	37U,65	336	65	0.19
College at Parker	51	576	470	0.82
Telegraph at Derby	40	528	240	0.45
Shattuck at Dwight	33,37,43,F	1,320	470	0.35
Martin L. King at Dwight	15	480	150	0.31
University at Martin L. King	37,43,51	1,200	920	0.77
Martin L. King at Hearst	7,67	840	230	0.27
Shattuck at Hearst	33,F	1,104	430	0.39
Oxford at Hearst	7,8,67	1,056	---	---

<sup>a</sup> For outbound direction during the 4 PM to 6 PM peak period.

<sup>b</sup> Load Factor is the number of passengers divided by the number of seats.

Source: City of Berkeley, 21651 Allston Way Office and Retail Building EIR, June 1988.

BART. BART, with a station at Center Street and Shattuck Avenue, provides transbay service and East Bay service to Richmond, Concord and Fremont. BART provides service weekdays from 6 AM to 12 midnight. The current PM peak hour load factors range from 0.75 to 1.27. For planning purposes, BART considers a 1.5 load factor as the maximum passenger-to-seats ratio acceptable to peak-hour passengers. Table 20 gives the latest available load factor information for PM peak-hour trains in the peak ridership direction.

Table 20

BART Weekday Load Factors for PM Peak Hour Trains<sup>a</sup>

<u>Location/Direction</u>	<u>Route</u>	<u>Capacity (Seats)</u>	<u>Passengers</u>	<u>Load Factor<sup>b</sup></u>
North of MacArthur Station	Daly City/ Richmond	2,102	2,531	1.20
	Fremont/ Richmond	1,289	836	0.65
East of MacArthur Station	Daly City/ Concord	4,475	5,348	1.20
South of Lake Merritt Station	Fremont/ Daly City	3,571	4,219	1.18
	Fremont/ Richmond	1,429	1,469	1.03
West of Civic Center Station (San Francisco)	All Routes	7,339	6,270	0.82

<sup>a</sup> For peak direction during PM peak hour.

<sup>b</sup> Load factor is the number of passengers divided by the number of seats.

Source: *BART Quarterly Performance Report, July - September 1988.*

Paratransit. Paratransit service is a mode of transportation that falls between driving alone in a private vehicle and traveling on a fixed route conventional bus/rail. Organized carpooling/vanpooling, taxi and other dial-a-ride services and shuttles using small vehicles all fall into the paratransit category. Downtown Berkeley is served by the following paratransit services:

- ☐ The University operates the Campus Shuttle between the campus and a stop on Shattuck Avenue (east side) across from the Downtown BART station.
- ☐ Lawrence Berkeley Laboratory provides shuttle service among their facilities atop the Berkeley Hills, the U.C. campus and a Downtown stop at Center Street and Shattuck Avenue (east side).



- ☐ Private taxi service is available on a call-as-needed basis or at a Downtown taxi stand.
- ☐ The City also sponsors a taxi rider (user-side) subsidy program to lower the fares for low-income, elderly and disabled riders.
- ☐ The accessible-van program is offered jointly by the cities of Berkeley, Oakland, Alameda, Albany, Emeryville and Piedmont.
- ☐ Carpool/vanpool information and matching assistance is provided by the Berkeley TRiP office, in conjunction with the regional ridesharing agency, RIDES for Bay Area Commuters.
- ☐ Berkeley has begun to provide parking-related ridesharing incentives. At the present time, carpools (which are registered with Berkeley TRiP) are eligible for a fifty percent parking discount at the Center Street and Sather Gate Garages. Vanpools pay only \$1.00 per month.

Transit Accessibility. Transit accessibility is not as good as the high level of service would imply. Several conditions make transit less effective than it could be and at times even inconvenient for Downtown employees and visitors:

- ☐ Many live too far from a transit stop or BART station.
- ☐ Trips for some take too long due to the need to transfer, the frequent stops and infrequent service.
- ☐ Riders face inadequate east-west service and access to the Downtown from neighborhoods west of Martin Luther King Jr. Way, northeast Oakland and the western portions of Albany and El Cerrito.
- ☐ The current AC Transit route structure is complex and not easily understood by the occasional user.
- ☐ Many Downtown bus stops have no shelter or other protection from inclement weather.
- ☐ Bus operating speeds are often low in the study area because of frequent stops, illegal parking in bus stops and conflicts with automobile and pedestrian traffic.
- ☐ BART service is frequent but not well located for many commuters. Parking and transit access at stations is not always easy.
- ☐ Funding of the Berkeley TRiP office, which is the primary source of information on bus and rail service and which promotes the sale of monthly transit passes Downtown, is unstable.

Existing Bicycle/Motorcycle/Moped Facilities. The city's bicycle system in the Downtown is discontinuous and lacks adequate signing. The lack of posted bicycle routes prevents motorists from having complete information about the presence of bicyclists.

Bicycle parking facilities consist of bicycle racks, spaces in parking garages and unofficial parking at meters (which is illegal), trees, railings and signposts. There are 103 bicycle racks in Downtown Berkeley located at twenty-three different locations, nineteen of which are along Shattuck Avenue. However, a survey taken in July 1986 indicated that only 43 out of a total of 156 bicycles parked Downtown were parked in bicycle racks. These figures indicate that many racks are not being used, either because they are inconveniently located or because they are unsafe and not secure. There are no on-street parking spaces for motorcycles/mopeds, only those in garages where they are offered special rates.

Existing Pedestrian Facilities. Pedestrian facilities include sidewalks and crosswalks.

Street crosswalks are clearly marked and signed in the Downtown. All intersections in the area and four mid-block locations are marked with crosswalks. Fifteen of the sixteen signalized intersections are equipped with pedestrian crossing signals showing hand/person graphic displays. The only signalized intersection without pedestrian crossing signals is the Center Street/Milvia Street intersection and they will be added to this intersection in 1989.

None of the pedestrian crossing signals are demand-actuated and none of the signalized intersections have exclusive pedestrian phases. Almost all major intersections have islands which allow pedestrians to go halfway across the street and wait for the next pedestrian phase if they cannot cross the entire street during a single phase of the signal. Wheelchair curb cuts have been installed at almost all intersections.

Most streets have fairly wide sidewalks that can accommodate existing pedestrian volumes. However, four pedestrian problem areas have been identified:

- ☐ There is a lack of consistency in the pedestrian signals in the study area which may confuse some pedestrians.
- ☐ The time allowed to cross wider streets in the study area is not always sufficient for some pedestrians who have impaired mobility.
- ☐ Pedestrian flow on sidewalks is impeded at a number of heavily used locations by stationary pedestrians waiting to board buses or to use automated bank teller machines and by newspaper racks located on the sidewalk.
- ☐ Heavy pedestrian movements at some intersections conflict with vehicular turning movements and through movements (at unsignalized intersections).

### Policies and Programs Significantly Affecting Transportation

A wide variety of policies and programs are proposed in the *Plan* to implement its objectives. Programs were first evaluated to determine if all policies have implementing programs and second to consider whether the programs would produce the effects desired.

Overview of Objectives, Policies and Programs. Within the Circulation and Transportation Element of the *Plan* there are six objectives and under each objective there are several policies. The objectives and policies emphasize a pedestrian oriented Downtown with reduced reliance on the single-occupant automobile while still maintaining an acceptable level of service on the transportation infrastructure.

The six objectives address the following topics:

1. Improving Transit Access and Facilities
2. Optimizing Circulation Network to Improve LOS
3. Balancing Parking Supply
4. Reducing Single Occupant Vehicle Use
5. Improving Pedestrian Access
6. Improving Bicycle Facilities

Each of these objectives are briefly discussed in terms of the policies that have been formulated to refine and implement each objective.

*Encourage the Use of Transit as the Primary Mode of Travel.* The policies developed to define this objective stress a "transit first" policy. They include improving the accessibility to transit, improving bus operations in the Downtown and improving transit facilities.

*Insure Adequate Vehicular Access to, from and within the Downtown.* This objective is defined primarily by the adoption of an intersection operation level of service (LOS) standard D. The standard would introduce a potential growth limiting factor into future development in Berkeley and indirectly help support the transit first policy by encouraging potential developers to actively participate in transportation system management (TSM) measures that would reduce auto use. The policies implementing this objective do not specifically refer to the LOS D standard, though they do refer to reducing congestion, diverting through traffic, encouraging the use of auto oriented streets.

*Create Adequate Parking Facilities to Support Land Use Policies for the Downtown.* This objective emphasizes improving short-term parking supplies to support retail development in the downtown. Controlling the amount of long-term parking would support the City's objectives of encouraging transit use, discouraging single-occupant vehicle use and maintaining acceptable level of service (LOS).

*Decrease Single-Occupant Vehicle Trips to and from the Downtown.* This objective is defined by two policies: promoting alternative modes of travel and establishing a transportation system management (TSM) plan.

*Create Safe and Convenient Pedestrian Access to, from and within the Downtown.* One overall goal of the *Plan* is to create a pedestrian-oriented Downtown. The policies under this objective stress decreasing pedestrian/vehicle conflicts. This includes improving street crossings, sidewalk capacity, and improving accessibility for physically disabled.

*Provide for Safe and Convenient Bicycle Use as a Means of Transportation.* The policies under this objective focus on developing a bicycle route plan through the Downtown, and providing bike parking.

*Programs to Implement Transportation Policies.* Implementation programs included in the *Plan* have been categorized into four groups:

1. Ordinance and Regulatory Changes
2. Studies
3. Short Range Capital Improvements and Other Projects
4. Long Range Capital Improvement Projects



Table 21 compares the policies and programs defined in the *Plan* to determine if an implementation program has been developed for each policy. In many cases, one program supports more than one policy. In three cases, policies are set forth in the Circulation and Transportation Element without supporting programs. These three policies are:

Policy 2.3 Divert through auto traffic from the Downtown core to peripheral streets without impacting residential areas.

Policy 5.3 Provide mid-block pedestrian pathways where feasible to shorten pedestrian walking distances.

Policy 5.4 Design a pedestrian network which responds to the access needs of the physically disabled.

The remainder of the *Policies and Programs* subsection (pp. 142 to 145) discusses how well the programs would support the policies and identifies any secondary impacts created by implementing the programs.

Ordinance and Regulatory Changes. There are four programs in this category. Together, they address policies under each objective.

Growth Management Program. There are three policies under this program that would negatively impact traffic conditions or should be clarified further.

- a. The adoption of the level of service standard would be effective if all uses were subjected to the requirement. Exempting retail uses from the standard could create a problem. Retail uses could be developed without providing traffic mitigation measures to meet the LOS D standard. Levels of service could be reduced to less than satisfactory conditions by new retail development and there would be no mechanism to mitigate impacts.

A potential secondary impact would be the restriction of office development on which many new retail outlets would depend for economic support.

- b. The LOS D standard policy is not clear as to whether it would be calculated based on each individual turning movement or overall intersection operation. Meetings with City staff suggest that the intent was to apply the standard to the overall operation of the intersection.<sup>30</sup> This would be consistent with Measure S. This approach is less restrictive and recognizes the fact that some individual movements can operate at unsatisfactory levels of service without compromising overall circulation in the Downtown.
- c. No time within the year is recommended for the monitoring program traffic counts. Unless counts are taken at comparable times of the year, it would be difficult to evaluate changes in traffic volumes.

---

<sup>30</sup> Meeting with Sylvia Toth, Planning and Community Development Department, 2 February 1989.

Table 21

## Comparison Among Objectives, Policies and Programs

		OBJECTIVES																			
		Transit				Vehicle Access				Parking			HOV		Pedestrians				Bikes		
		1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	3.1	3.2	3.3	4.1	4.2	5.1	5.2	5.3	5.4	6.1	6.2	6.3
<u>PROGRAMS</u>	Policy:																				
<u>Ordinance and Regulatory Changes</u>																					
1.1	Growth Management			X		X							X	X		X					
1.2	TSM Ordinance												X	X							X
1.3	Parking Management Plan									X	X		X								
1.4	Revise Zoning Ordinance			X	X	X							X	X							X
<u>Studies</u>																					
2.1	Review AC Transit Plan	X			X								X								
2.2	Parking Feasibility						X		X	X											
2.3	Bike Circulation System					X	X												X		
2.4	Satellite Parking		X			X					X	X									
2.5	Shattuck Square			X		X										X					
<u>Short Range Capital Improvements</u>																					
3.1	Bus Shelters				X								X	X		X					
3.2	Transit Maps												X	X							
3.3	Bike Parking Spaces												X							X	
3.4	Motorcycle/Moped Parking												X								
3.5	Curb Car/Van Pool Spaces												X								
3.6	Increase Enforcement			X		X				X			X								
3.7	Improve LOS			X		X	X														
<u>Long Range Capital Improvements</u>																					
4.1	Build Downtown Parking						X		X	X											
4.2	Build Satellite Parking	X				X					X	X									
4.3	Reconstruct Shattuck Sq.			X		X										X					

Source: Barton-Aschman Associates, Inc.

Transportation System Management Ordinance. The program to establish a TSM ordinance includes measures that range from requiring employers to provide surveys of their employees to requiring employers to provide monetary incentives to use bikes, transit and participate in carpools.

One measure not identified in the list is that of requiring private sector employees in onsite parking facilities to pay for parking. This measure would not be easy to implement, however. But with increasing City control of parking supplies through the development of central parking garages funded by in-lieu fees, the City would be in a position to adopt strategic rates for its garages and thus better able to influence the use of parking supplies.

Parking Management Plan. The implementation of the parking management plan would occur in concert with the TSM implementing program. The program elements support the increase of short term parking while providing a disincentive for long term parking.

It should be noted that implementation of the Residential Permit Parking program in the neighborhoods around the Downtown will further exacerbate the shortage of parking in the Downtown, increasing parking demands for as much as 260 long term spaces.

Revision of the Zoning Ordinance. There are four policies under this program that would negatively impact parking conditions or should be clarified further.

- a. The *Plan* proposes include reducing the parking ratio from 2.0 to 1.5 per 1000 square feet of gross floor area. However, changes in use to retail and new retail construction with a building area of 100,000 square feet or greater in the core subarea would be exempt from the parking requirement. This would support the concurrent implementation of the TSM and parking management programs. However, whether the TSM and parking management programs can create the mode shift required to support the parking supply reduction is the key question.

It is important to remember that a mode shift of this magnitude would not be easily achieved. Berkeley already experiences a low auto driver mode split: about 50 percent of all trips are made by auto. Further shifts would be harder to achieve as persons most susceptible to shifting modes have already done so. This is not to say that it would be impossible, but, when combined with the impacts of the RPP program, a coordinated implementation of the TSM and parking management programs would be required in order to make it work.

The reduced parking supply would force shifts in mode of travel and changes in travel patterns. The TSM program and parking management program would facilitate the forced shift and provide support to persons wishing to modify travel habits. But, it should be noted that there is presently a latent parking demand that will fill up any parking spaces made available. Furthermore, this latent demand is bound to grow in the future.

Another potential impact of a reduced parking ratio would involve difficulties experienced by developers when seeking financing for new projects under such conditions. Lenders tend to be conservative and often insist on parking requirements for projects that are greater than city requirements, even where ratios are greater than those under consideration here. It is not possible to address this question definitively in this EIR, as it would require a fairly detailed economic study. However, it is raised here as an issue that should be considered. A project-specific parking demand study would have to analyze and compare rents, parking supplies, accessibility and alternative transportation options for similar developments competing for the same tenants.

- b. Exempting large retail uses (100,000 square feet or more) in the core subarea from providing any parking could result in a significant shortage of parking.

The *Plan* suggests that parking demand for a large retail development would be less than for a free standing building outside of the Downtown. However, if the development were to draw customers from a regional market, they would likely drive autos to the project. A shortage of parking would have to be supplied by others, probably the City.

The *Plan* presumes that retail parking demand could be met through shared or leased parking arrangements. This presumes, however, that parking would be available to share or lease. Even with the shift of long term parking out of the Downtown area, existing shortages and future demands could exceed potential supplies. Though the City is proposing a 300-space parking structure, that project is intended to meet existing shortages.



- c. The in-lieu fee for parking and the transportation services fee raise two questions problems. First, they do not have an escalation factor to take inflation into account. Second, the parking in-lieu fee is not based upon the actual costs that the City would incur for constructing off-site parking garages. Construction costs, land costs (if appropriate), replacement costs for existing spaces (if built on an existing City parking lot) as well as financing costs would be experienced.
- d. The parking ratio does not indicate if it is a minimum, maximum or fixed requirement. Discussions with the City indicate that is a fixed figure, similar to the existing code.<sup>31</sup>

Studies. Five programs or studies are proposed in the Circulation and Transportation Element of the *Plan*. For the most part, they support the five categories of objectives listed in Table 21 (p. 143). Two studies, however, could prove problematic.

AC Transit Service Plan Study. The *Plan* mentions that a load factor of 1.0 is desirable through the Downtown. AC Transit District policy stipulates a maximum load factor of 1.25 and the District is not likely to fund the maintenance of the lower factor.

Satellite Parking Study. The description of the satellite parking program indicates a possible shuttle serving the facilities. Initial funding is identified as coming from grants. Long range funding is not identified.

Short Range Capital Improvements and Other Projects. These programs include identifying motorcycle and moped parking spaces and do not relate to any specific policy.

Not all intersection improvements and circulation modification strategies developed in the *Downtown Transportation Study* (Cambridge Systematics, 1986) were included in the *Draft Berkeley Downtown Plan*. Some were excluded because of secondary adverse impacts that would be produced by their implementation.

Long Range Capital Improvement Projects. This category includes three programs that specifically implement three projects identified in the Policy section of the *Plan*. Specifically, a new parking garage, satellite parking and the reconstruction of Shattuck Square. It is unclear if the parking facility would provide a total or a net increase of 300 spaces but discussions with the City indicate that a net increase is intended.<sup>32</sup>

### Impacts Due to New Development Allowable Under the Plan

The transportation impact analyses of the four alternatives follows a standard approach established by the traffic engineering profession. Existing conditions are established; future background traffic volumes without the project are projected; traffic volumes for each alternative are calculated; traffic is assigned to the roadway network and transit system; and total traffic impacts are calculated and evaluated.

<sup>31</sup> See Footnote 30.

<sup>32</sup> See Footnote 30.

In developing the specific methodology for applying the above approach to this transportation impact analysis of the *Downtown Plan*, several assumptions were established by the City. The primary requirement was that the EIR consultants use inputs and analysis generated by the *Downtown Transportation Study* as much as possible.<sup>33</sup> For example, the City stipulated that the base year traffic volumes used in the *Downtown Transportation Study* were satisfactory and asked that they be used to define existing conditions, unless more current counts were available.

Downtown development that took place between 1983 and 1988 was added to the analysis for each of the alternatives in order to account for the changes in traffic volumes on local roadways occurring since the base year used in the *Downtown Transportation Study* (1983).

The other stipulation established by the City was that traffic projections be generated using the computerized transportation model created for the *Downtown Transportation Study*. Several inputs to this analysis are included in the model: trip generation assumptions, mode splits and traffic assignment assumptions.

Land Use Assumptions. Two key sets of traffic model inputs are briefly explained.

Cumulative Land Use Changes. Land use changes since existing conditions were established in 1983 for the transportation model must be included in the calculations. Between 1983 and 1988, nine projects have been completed adding office and retail space to the Downtown. (See Barton-Aschman Associates, Inc. technical background report for a full description of the projects).

Other future cumulative development that has been proposed outside of the Downtown includes expansion of the Lawrence Berkeley Labs (LBL), development at the UC campus and other projects adjacent to but outside the Downtown. These projects are described in Chapter V, *Cumulative and Growth Inducing Impacts*, below.

Future Land Use Changes in the Downtown Study Area. Each of the four EIR alternatives are described in Tables 3-6 above (pp. 34 to 37). Those tables describe the total developable square footage on each of 24 parcels. For traffic impact analysis purposes, it is necessary to evaluate the net impacts of each alternative (total developable square footage by land use type minus existing development). For readers interested in these data, the technical background report includes a table (Table 8) listing them by alternative for each parcel.

Traffic Impacts. In order to forecast traffic impacts in terms of changes to intersection levels of service, several precursor steps must be taken. Each is summarized in turn below.

Trip Generation. The number of new trips generated by each land use category must be calculated as the first step. Daily person trips by land use, developed as a part of the *Downtown Transportation Study*, are used in this analysis. Table 22 presents trip generation rates for land uses included in the proposed *Downtown Plan*.

---

<sup>33</sup> See Footnotes 24 and 26.

Table 22

## Trip Generation Rates: Total One-Way Person Trips

<u>Land Use</u>	<u>Daily Person Trip Rate</u>
Retail	157 trips per 1,000 square feet
Office	18 trips per 1,000 square feet
Auto Related	157 trips per 1,000 square feet
Multi-Family	10 trips per dwelling unit

Source: Cambridge Systematics, *Downtown Transportation Study*, November 1986.

These rates assume fully occupied floor space and were factored down to reflect the effects of expected vacancy rates. The trip rates were then disaggregated into three types of trips:

- Home-based work trips (HBW)
- Home-based non-work trips (HBNW)
- Non-home-based trips (NHB).

They were further differentiated between trips attracted and trips produced. Peak hour factors, mode of travel and auto occupancy by time of day assumptions were also developed to represent existing conditions.

The peak hour trip generation volumes are most critical during the evening commute period. Both background volumes and projected auto trip generation are greatest at this time. For this reason, traffic impacts are evaluated for the PM peak period.

The mode split was assumed to remain the same as it is for existing conditions.<sup>34</sup> The resulting overall PM peak hour mode split resulting from the application of the DIA model was 68 percent auto, 20 percent transit and 12 percent bike or walk, with an auto occupancy averaging 1.4.

The average rate of auto occupancy varies over the day and with each of the four alternatives due to the interaction of all the trip generation variables for each of the land use categories. The overall daily auto occupancy for the Downtown would be approximately 1.6 persons per auto. During the AM peak it would be 1.3 persons per auto and during the noon peak hour it would be 1.9. During the PM peak hour it would be approximately 1.4.

All of these factors were incorporated into the Development Impact Assessment (DIA) model prepared for the *Downtown Plan* and then applied to the land use projections. The trip generation associated with the net increase in building area was calculated and is summarized in Table 23.

As summarized in Table 23, the No Action Alternative would add 1,800 auto trips, 800 transit trips and 400 bike/walk trips to the transportation system during the PM peak hour. The Base Plan would add 2,100, 800, and 500 trips, respectively. The Maximum Bonus Alternative would add 3,300 auto trips, 1,200 transit trips and 800 bike/walk trips. The Low Intensity Alternative would add 760 auto trips, 300 transit trips and 200 bike/walk trips.

<sup>34</sup> The implications of the mode shift target derived from the TSM measures included in the *Downtown Plan* is discussed below (p. 157).



Table 23

## Net Increase in Trip Generation

	<u>No Action</u>				<u>Base Plan</u>				<u>Maximum Bonus</u>				<u>Low Intensity</u>			
	<u>ADT</u>	<u>AM</u>	<u>NOON</u>	<u>PM</u>	<u>ADT</u>	<u>AM</u>	<u>NOON</u>	<u>PM</u>	<u>ADT</u>	<u>AM</u>	<u>NOON</u>	<u>PM</u>	<u>ADT</u>	<u>AM</u>	<u>NOON</u>	<u>PM</u>
External Person Trips	35360	2651	3578	3651	41202	2551	4268	4139	66846	3721	6922	6617	15830	1019	1478	1579
External Auto Vehicle Trips																
Inbound	8227	1054	654	645	9551	941	778	805	15431	1257	1264	1369	3602	292	278	344
Outbound	8227	165	654	1177	9551	232	778	1263	15431	452	1264	1926	3602	171	278	418
Total	16454	1219	1308	1822	19102	1173	1556	2068	30862	1709	2528	3295	7204	463	556	762
Auto Occupancy	1.46	1.25	1.89	1.32	1.51	1.31	1.93	1.37	1.54	1.35	1.94	1.40	1.54	1.32	1.85	1.42
Transit Trips	7221	854	584	800	7526	750	649	806	11514	1024	1018	1208	2943	299	229	309
Bike/Walk Trips	4117	277	527	438	4810	269	623	499	7776	392	989	790	1781	107	221	190

Net Increase in Trips Compared with the No Action Alternative

External Person Trips	5842	-100	690	488	31486	1070	3344	2966	-19530	-1632	-2100	-2072
External Auto Trips												
Inbound	1324	-113	124	160	7204	203	610	724	-4625	-762	-376	-301
Outbound	1324	67	124	86	7204	287	610	749	-4625	6	-376	-759
Total	2648	-46	248	246	14408	490	1220	1473	-9250	-756	-752	-1060
Transit Trips	305	-104	65	6	4293	170	434	407	-4278	-555	-355	-491
Bike/Walk Trips	693	-8	96	61	3659	116	462	352	-2336	-170	-306	-248

Source: Barton-Aschman Associates, Inc.

Trip Distribution and Assignment. The increase in trips associated with each block was assigned to entry/exit corridors based on the existing distribution of traffic entering and leaving through these cordon points. This process was developed in the *Downtown Transportation Study*. Traffic was assigned (using the traffic modeling program, TMODEL), to the street network based on the shortest path between the Downtown zone (block) and the entry/exit point. The resulting intersection turning movement volumes for the PM peak hour were added to the existing volumes to obtain future traffic volumes.

Cumulative Traffic. Traffic generated by other cumulative development was also added to the existing volumes. Where possible (e.g., trips generated by Lawrence Berkeley Labs), traffic projections prepared for studies of those projects were used. For other projects (e.g., UC Berkeley projects and the potential new County Courthouse), trip generation was estimated and assigned by Barton-Aschman, based on information made available to the EIR consultants in late 1988. (See technical background report, Table 11, for a detailed presentation of the trip generation for cumulative projects.) \*

The projected traffic associated with each of these developments was added to existing conditions to get total future traffic volumes on the Downtown street system.

Levels of Service at Signalized Intersections. Table 24 presents projected future operating conditions for each of the signalized intersections. Two categories of information are presented. The first is a measure of the overall operation of the intersection. The second presents those movements for which the LOS is E or worse.

No Action. Three intersections would operate at an overall LOS of D. Each would have movements operating at level of service F. These intersections are:

- Oxford/University
- Shattuck (NB)/University
- Martin Luther King/University

All other intersections would operate at an overall LOS of C or better but one or more movements at three of these intersections would operate at unsatisfactory levels.

- Shattuck (SB)/University
- Shattuck/Allston
- Shattuck/Durant

In addition, the intersection of Shattuck/University, both northbound and southbound, would operate at unsatisfactory levels of service based upon existing observations of these intersections. The capacity calculation methodology used in this report does not take into account the interrelationship of the operations of these two intersections. It appears that they would actually operate in the D/E range with some movements at F rather than at the calculated LOS of B and D.

Base Plan. With this alternative, four intersections would operate at an overall LOS of D. In addition, each intersection would have movements operating at LOS F. These four intersections are:

- Oxford/University
- Shattuck (NB)/University
- Martin Luther King/University
- Shattuck/Allston

All other intersections would operate at an overall LOS of C or better, but at three intersections, some movements would operate at unsatisfactory levels of service:

- Shattuck (SB)/University
- Milvia/Center
- Shattuck/Durant

In addition, the intersection of Shattuck/University, both northbound and southbound, would operate at unsatisfactory levels of service based upon field observation of these intersections. They would operate in the D/E range with some movements at F rather than at the calculated LOS of D and C.

Maximum Bonus. With the Maximum Bonus Alternative, Milvia/University is projected to operate at LOS E with all westbound movements operating at LOS F. This poor level of service stems from the lack of a left turn lane on westbound University. Shattuck/Allston is also projected to operate at LOS E with eastbound and westbound approaches operating at LOS F and the southbound left movement operating at LOS F.

Table 24

## Cumulative Intersection Level of Service Summary

Intersection	No Action			Base Plan			Maximum Bonus			Low Intensity		
	Overall LOS	Movmnt with LOS E or Worse LOS		Overall LOS	Movmnt with LOS E or Worse LOS		Overall LOS	Movmnt with LOS E or Worse LOS		Overall LOS	Movmnt with LOS E or Worse LOS	
Oxford and University	D	SB Right	F	D	SB Right	E	D	SB Right	F	D	SB Right	F
Shattuck (NB) and University	D*	NB Right	F	D*			D*	NB Right	F	D*	NB Right	F
Shattuck (SB) and University	B*	EB Right	F	C*			C*	EB Left	F	B*		
Milvia and University	C			C			E	WB All	F	B		
Martin Luther King and University	D	NB Left	F	D	NB Left	F	D	NB Left	F	D	NB Left	F
Shattuck (NB) and Addison	B			B			B			B		
Shattuck (SB) and Addison	D			B			C	EB All	F	B		
Oxford and Center	B			B			B			B		
Shattuck and Center	B			B			B			B		
Milvia and Center	C			C	NB All	E	D	NB All	F	C		
Shattuck and Allston	B	EB All	E	D	WB All	F	E	SB Left	F	B	EB All	E
					EB All	F		WB All	F			
								EB All	F			
Milvia and Allston	B			B			B			B		
Martin Luther King and Allston	B			B			B			B		
Shattuck and Kittredge	B			B			C	WB All	F	B		
Oxford and Bancroft	C			C			C			C		
Shattuck and Bancroft	B			B			B			B		
Fulton and Durant	B			B			B			B		
Shattuck and Durant	C	SB Left	F	C	SB Left	F	C	SB Left	F	C	SB Left	F

\* Observations suggest that these intersections are operating at LOS D or E.

Source: Barton-Aschman Associates, Inc.

Four intersections would operate at an overall LOS of D. Each would have movements operating at LOS F. These four intersections are:

- Oxford/University
- Shattuck (NB)/University
- Martin Luther King/University
- Milvia/Center

All other intersections would operate at an overall LOS of C or better. However, at four of these intersections one or more movements would operate at unsatisfactory levels:

- Shattuck (SB)/University
- Shattuck (SB)/Addison
- Shattuck/Kittredge
- Shattuck/Durant

In addition, the intersection of Shattuck/University, both northbound and southbound, would operate at unsatisfactory levels of service based upon field observations. They would operate in the D/E range with some movements at F rather than at the calculated LOS of D and C.



Low Intensity. With the Low Intensity Alternative, three intersections would operate at an overall LOS of D. Each of these intersections would also experience LOS F for some movements:

- Oxford/University
- Shattuck (NB)/University
- Martin Luther King/University

All other intersections would operate at an overall LOS of C or better, but three intersections would include some movements at unsatisfactory levels:

- Shattuck (SB)/University
- Shattuck/Allston
- Shattuck/Durant

In addition, the intersection of Shattuck/University, both northbound and southbound, would operate at unsatisfactory levels of service based upon field observation. They would be operating in the D/E range with some movements at F and not at the calculated LOS of D and C.

Impacts at Unsignalized Intersections. The *Downtown Transportation Study* recommends that the seven unsignalized intersections be signalized. City staff has indicated that signals would not be recommended unless a large traffic generator were located on the minor street (because of the delay to through traffic, difficulty of coordinating the signals on the major street and traffic increases on the minor street).<sup>35</sup>

Regional Access Points. Regional traffic approaches Downtown Berkeley via four major corridors: (1) the University Avenue corridor (I-80) from the west; (2) the Ashby Avenue corridor (I-80) from the west; (3) the Ashby Avenue corridor from the east (Tunnel Road); and (4) the Martin Luther King/Shattuck/Telegraph corridor from the south.

Each of these corridors consists of arterial streets on which the PM peak hour traffic volumes are currently nearing or exceeding capacity. Traffic increases due to cumulative growth through the year 2010 (even without new growth in Downtown Berkeley) would have an impact on these regional corridors. They would be further congested by any of the four alternatives analyzed in this report, but would be most greatly influenced under the Maximum Bonus Alternative. For those corridors operating at capacity, increased peak hour traffic volume would effectively extend the peak making it last longer than it currently does. Table 25 summarizes the estimated change in traffic volumes for each corridor.

Transit Impacts. Transit ridership would increase by 800 person trips in the PM peak hour for both the No Action and Downtown Plan Alternatives. It would increase by 1,200 person trips with the Maximum Bonus Alternative and by 300 trips with the Low Intensity Alternative.<sup>36</sup>

The implementation of the Residential Permit Parking plan would cause some drivers to shift to transit and could add up to additional 920 PM peak hour transit riders.<sup>37</sup> Other cumulative projects would also add an additional 450 PM peak hour transit trips.

<sup>35</sup> Chuck DeLeuw, City Traffic Engineer, personal communication, 8 February 1989.

<sup>36</sup> These estimates exclude the additional ridership associated with the implementation of the TSM program. The effects of the TSM program are discussed below on page \_\_\_\_.

<sup>37</sup> *City of Berkeley Residential Permit Parking Program EIR*, ESA, September 1988.

Table 25

Summary of Corridor Impacts  
(Year 2010 PM Peak Hour)

	Corridor				
	University/ 6th Street	Ashby/ I-80	Ashby/ Tunnel Rd.	Shattuck/MLK/ Telegraph	I-80
<u>No Action</u>					
2010	3,930	4,110	4,430	8,310	24,000
Project	220	40	220	410	260
2010 + Project	4,150	4,150	4,650	8,720	24,260
Percent Change	5.5	0.9	5.0	4.9	1.1
<u>Base Plan</u>					
2010	3,930	4,110	4,430	8,310	24,000
Project	260	50	250	490	310
2010 + Project	4,190	4,160	4,680	8,800	24,310
Percent Change	6.6	1.2	5.6	6.8	1.3
<u>Maximum Bonus</u>					
2010	3,930	4,110	4,430	8,310	24,000
Project	420	90	400	790	510
2010 + Project	4,350	4,200	4,830	9,100	24,510
Percent Change	10.6	2.2	9.0	9.5	2.1
<u>Low Intensity</u>					
2010	3,930	4,110	4,430	8,310	24,000
Project	80	20	100	180	100
2010 + Project	4,010	4,130	4,530	8,490	24,100
Percent Change	2.0	0.5	2.3	2.2	0.4

Source: Barton-Aschman Associates, Inc. based on data provided in: *Berkeley Waterfront Plan EIR*, August 1986; *Aquatic Park Center EIR*, November 1986; *Courtney Building DEIR*, December 1985; and *West Berkeley Transportation Report*, October 1987.

On the basis of existing ridership patterns of downtown employees, it has been assumed that 60 percent of the ridership increases would be on BART and 40 percent would be on AC Transit.<sup>38</sup> Table 26 presents the total PM peak hour transit trips added by both the cumulative and Alternative development scenarios.

<sup>e</sup>  
AC Transit. AC Transit is developing a new Comprehensive Service Plan that simplifies its route structure serving Downtown Berkeley. One route would be added and frequency of service would be improved on some routes. The capacity of service to the Downtown would increase by approximately 10 to 15 percent. A comprehensive analysis of AC transit service is underway as part of the City-wide Transportation Plan.

<sup>38</sup> Berkeley Chamber of Commerce Survey of Downtown Employees, 1987.

Table 26

Downtown Employee  
PM Peak Hour Transit Trips

<u>Alternative</u>	<u>AC</u>	<u>BART</u>	<u>Total</u>
No Action	320	480	700
Base Plan	320	480	700
Maximum Bonus	480	720	1,200
Low Intensity	120	130	300
Cumulative	540	760	1,200

Source: Barton-Aschman Associates, Inc.

Table 27 shows the projected capacity of the AC Transit routes serving the Downtown and the impact of the additional transit riders on service. The PM ridership increases on AC Transit are expected to increase the average load factor from the current level of 0.46 to 0.50 (Low Intensity Alternative) to 0.57 (Maximum Bonus Alternative). Load factors are expected to exceed 1.0 on the University Avenue corridor for all alternatives with the Maximum Bonus Alternative near capacity (defined by AC Transit as 1.25).

BART. According to the 1988 BART short range transit plan, BART system capacity is expected to increase by about 50 percent by 1992.<sup>39</sup> Passenger volumes are projected to increase by approximately 45 percent on all transbay routes and by about 15 percent on the Richmond/Fremont line.

Table 28 shows projected load factors on BART lines serving Berkeley. The impact on load factors would be similar for all alternatives. All lines but the Fremont/Richmond line and the lines west of Daly City would experience peak hour load factors greater than 1.0. However, all load factors would be below BART's peak hour capacity load factor of 1.5.

Parking Impacts. The issue of parking supply and demand is one of the most complex facing Downtown Berkeley. In this section, parking supplies are compared with likely demands under each alternative and any surpluses or deficiencies are noted. Note that the proposed parking requirements vary under each alternative (both in terms of the ratio of required spaces per 1,000 square feet of development and the exemptions allowed). The supply to be provided - by private developers onsite or in consolidated lots or public garages via in-lieu fees - also varies by alternative.

Supply. Tables 3 through 6 (pp. 34 to 37) show the assumptions regarding parking supplies for each of the four alternatives.

The No Action Alternative would maintain the existing requirement of 2.0 spaces per 1,000 square feet of gross floor area (GFA). This would produce a parking supply of 2,688 spaces, all located on individual project sites.

<sup>39</sup> BART, *A Plan for Progress: 1988 BART Five Year Plan*, September 1988.



Table 27

## Projected AC Transit Peak Hour Load Factors

<u>Cordon Station</u>	<u>Route<sup>a</sup></u>	<u>Load Factors</u>				
		<u>Existing</u>	<u>No Action</u>	<u>Base Plan</u>	<u>Max. Bonus</u>	<u>Low Density</u>
Warring/Parker	52	0.19	0.30	0.30	0.31	0.28
College/Parker	40,40L	0.82	0.60	0.60	0.63	0.55
Telegraph/Derby	37,51,54L	0.45	0.27	0.27	0.28	0.25
Shattuck/Dwight	65,43,106	0.35	0.78	0.78	0.82	0.72
Martin Luther King/ Dwight	15	0.31	0.73	0.73	0.78	0.68
University/ Martin Luther King	51,51L	0.77	1.16	1.16	1.23	1.08
Martin Luther King/ Hearst	15	0.27	0.47	0.47	0.50	0.44
Shattuck/Hearst	7,40,43,52,67	0.39	0.40	0.40	0.42	0.37
Hearst/Oxford	52,8,65	---	---	---	---	---

<sup>a</sup> Route structure reflects proposed changes to AC transit routes.

Source: Barton-Aschman Associates, Inc.

Table 28

Projected BART Load Factors  
PM Peak Periods/Peak Direction

<u>Location</u>	<u>Route</u>	<u>Projected Load Factors</u>					
		<u>Existing</u>	<u>Future Baseline</u>	<u>No Action</u>	<u>Base Plan</u>	<u>Max. Bonus</u>	<u>Low Intensity</u>
North of MacArthur Station	Daly City/ Richmond	1.20	1.16	1.21	1.21	1.22	1.20
	Fremont/ Richmond	0.65	0.68	0.79	0.79	0.80	0.77
East of MacArthur Station	Daly City/ Concord	1.20	1.16	1.23	1.23	1.24	1.22
South of Lake Merritt Station	Fremont/ Daly City	1.18	1.14	1.14	1.14	1.14	1.14
	Fremont/ Richmond	1.03	1.09	1.23	1.23	1.26	1.20
West of Civic Center Station (San Francisco)	All Routes	0.82	0.83	0.84	0.84	0.84	0.83

Source: Barton-Aschman Associates, Inc.

The Base Plan Alternative would include a reduced parking ratio of 1.5 spaces per 1,000 square feet of GFA of commercial development. No parking would be required for changes in use to retail or for new retail of 100,000 square feet or more in the core subarea. Approximately 649 parking spaces would be provided onsite and in-lieu payments would provide for an additional 1,040 spaces to be built by the City. This analysis assumes that the spaces provided through in-lieu payments would be available when needed. No phasing plan for their provision has yet been developed.

The Maximum Bonus Alternative would use the same parking assumptions as the Base Plan Alternative. With this alternative, 858 spaces would be provided onsite and in-lieu payments would be made for an additional 647 spaces for a total of 1,505 spaces.

The Low Intensity Alternative assumes that the existing 2.0 spaces per 1,000 parking requirement would be maintained and that no exemptions would be allowed. This alternative would provide 1,595 parking spaces, all onsite, with the additional assumption that 794 of these spaces would be constructed one level below grade.

Other supplies that would be provided include 200 spaces in satellite lots and 300 spaces in a new Downtown garage. The purpose of these facilities would be to meet existing parking shortages and mitigate the impacts of the implementation of the RPP plan. The satellite parking is explicitly included in the Base Plan and Maximum Bonus Alternatives and is also included in the Low Intensity and No Action Alternatives because it is considered a mitigation measure for the implementation of the RPP program. The 300-space garage is only included in the Base Plan and Maximum Bonus Alternatives. Possible locations for this facility include the existing City lots on Berkeley Way and on Kittredge.

Each alternative assumes a loss of existing parking as new development on the 24 parcels identified for development replaces any parking that is there now. Most of these lost spaces serve existing uses and so will not impact overall future supplies and demands. However, there are two parcels currently providing public parking that are part of the 24 developable parcels. If developed, the Kittredge and Fulton/Durant lots would result in a loss of 162 spaces.

Demand. Future parking demands were calculated assuming that the current ratio of 2.0 spaces per 1,000 square feet represents existing demand. It should be noted that even this existing 2.0 per 1,000 ratio is an imposed constraint that reflects Berkeley city policy to discourage auto use. If supplies were not a constraining factor, the average demand would probably be closer to 2.5 spaces per 1,000 square feet.

The amount of parking required by each of the alternatives is projected as follows: No Action Alternative, 2,688 spaces; Base Plan 2,182 spaces; Maximum Bonus Alternative 2,626 spaces; and Low Intensity Alternative 1,595 spaces.<sup>40</sup> Table 29 summarizes these projections.

In addition to demand for parking generated by Downtown growth, future demand on Downtown parking supplies would result from the implementation of the Residential Permit Parking (RPP) program. This would add demand for up to 260 additional parking spaces in the Downtown.<sup>41</sup> The *Downtown Transportation Study* also projected an existing shortage of 90 parking spaces due to the higher than desired occupancy of curb spaces. It should be noted that this figure could be much higher as there is a great deal of latent parking demand that would fill spaces as they are made available. This is taken into account in the RPP figures.

<sup>40</sup> As noted elsewhere in this section, any reduction in demand associated with the TSM and parking programs is discussed in a subsequent section (p. 157).

<sup>41</sup> See footnote 36.

Surplus/Deficiencies. There would be a shortage of parking spaces associated with each alternative. The No Action and Low Intensity Alternatives would result in a gap between supply and demand of 312 spaces, both due to the loss of public parking spaces and the unmet existing demand for parking spaces. The large deficits shown in the Base Plan and Maximum Bonus Alternatives, are associated both with the reduced office and retail parking requirement and the exemption of large new retail uses from having to provide parking.

Table 29

Future Parking Demands, Supplies and Deficiencies

	<u>No Action</u>	<u>Base Plan</u>	<u>Maximum Bonus</u>	<u>Low Density</u>
<u>Parking Supplies</u>				
Alternatives <sup>a</sup>	2,688	1,689	1,505	1,595
Satellite Lots <sup>b</sup>	200	200	200	200
New Garage <sup>c</sup>	0	300	300	0
Elimination of Spaces	<u>-162</u>	<u>-162</u>	<u>-162</u>	<u>-162</u>
Total	2,726	2,027	1,843	1,633
<u>Parking Requirements</u>				
Alternatives <sup>d</sup>	2,688	2,182	2,626	1,595
RPP Plan <sup>e</sup>	260	260	260	260
Curb <sup>f</sup>	<u>90</u>	<u>90</u>	<u>90</u>	<u>90</u>
Total	3,038	2,532	2,976	1,945
Surplus/Deficiencies	-312	-505	-1,133	-312

<sup>a</sup> Existing shortages.

<sup>b</sup> Includes both onsite and in-lieu payment parking supplies.

<sup>c</sup> Has been proposed to mitigate both existing shortages and RPP shortages.

<sup>d</sup> Based upon existing ratio for office and retail of 2.0 spaces per 1,000 square feet GFA. No TSM assumed.

<sup>e</sup> Represents existing shortages.

<sup>f</sup> Represents existing shortages. Reflects theoretical shortage that must be met to achieve 90% curb occupancy.

Source: Barton-Aschman Associates, Inc.

Pedestrian and Bicycle Impacts. The net increase in total pedestrian and bicycle trips in the Downtown varies by alternative from a low of 7 percent for the Low Intensity Alternative to a high of 25 percent for the Maximum Bonus Alternative. These increases in volume could be accommodated in most places. In regard to pedestrians, those locations where problems exist today would experience a further reduction in level of service. In general, additional bike storage facilities are needed Downtown as are better defined bike routes. The *Plan* does include mechanisms for requiring bike storage facilities with new developments.



Transportation System Management Program Impacts. The TSM program would be part of both the Base Plan and the Maximum Bonus Alternatives. Its goal is to reduce single occupant auto use. To be effective it must be implemented along with the proposed parking management plan and the reduction in parking supply ratios. If any of the three components is not implemented, or is only partially implemented, then it is unlikely that large shifts in mode usage would occur. The goal of the TSM program is to increase the transit, shared ride, bike and walk mode split from 50 percent to 60 percent of all person trips. Table 30 compares the effect on trip generation with and without this mode shift.

Table 30

Impacts on Mode Split Associated with the TSM Program  
PM Peak Hour

	<u>Trip Generation (without TSM)</u>	<u>Trip Generation (with TSM)</u>
<u>Base Alternative</u>		
Total Person Trips	4,139	4,139
External Auto Trips		
Inbound	805	643
Outbound	1,263	1,011
Total	2,068	1,654
Auto Riders	766	920
Auto Occupancy	1.37	1.56
Transit Trips	806	965
Bike/Walk Trips	499	600
<u>Maximum Bonus Alternative</u>		
Total Person Trips	6,617	6,617
External Auto Trips		
Inbound	1,369	1,091
Outbound	1,926	1,536
Total	3,295	2,627
Auto Riders	1,324	1,590
Auto Occupancy	1.40	1.63
Transit Trips	1,208	1,450
Bike/Walk Trips	790	950

Source: Barton-Aschman Associates, Inc.

Mode Split Impacts. The assumed increase in non-driver modes of travel would increase the number of PM peak hour transit trips (BART and AC Transit combined) by 159 and 242 trips for the Base Plan and Maximum Bonus Alternatives, respectively. Of these additional transit trips, 60 percent would use BART and the remaining 40 percent would use AC Transit. The increased usage would impact the load factors of each system. However, no load factors would exceed the standard of 1.50 set by BART and 1.25 set by AC Transit.

Parking Impacts. The TSM program would reduce parking demands but not enough to make up for the proposed exemption from parking requirements for specified retail uses.

The transportation technical background report estimates a reduction in parking demand after implementation of the TSM program of 460 spaces with the Base Alternative and 705 spaces with the Maximum Bonus Alternative. The resulting net shortage of parking for the Base Alternative would be 45 spaces (compared to 505 spaces without TSM). The resulting shortage for the Maximum Bonus Alternative would be 428 spaces (compared to 1,133 spaces without TSM).

Thus, if the TSM proposals and the parking management plan were fully implemented and successful in achieving this substantial mode shift, the shortage of parking spaces under the Base Alternative would be nearly erased. The shortage remaining under the Maximum Bonus Alternative (428 spaces) would result from the reduction in parking supply ratios and exemption of large retail projects in the core subarea. The gap between supply and demand would be bridged by auto drivers either searching for spaces in the surrounding neighborhoods or putting additional pressure on the already short supply of public spaces.

#### **Public Improvements or Program Mitigation Measures Included in the Plan**

The *Downtown Plan* includes some programs and proposed infrastructure improvements that would either partially or fully mitigate traffic and parking impacts.

Programs. The implementation of a comprehensive TSM plan would reduce projected traffic volumes. This program could include modifying the City's zoning ordinance to require developments within the downtown to provide designated parking spaces for carpools, vanpools, motorcycles and bicycles. Other development requirements might include the funding of transportation coordinator positions, implementation of flexible work hours, elimination of free parking for employees unless utilized by vanpools or carpools, subsidized transit passes for employees and installation of shower and locker facilities to encourage bicycling to work. These program elements would provide support for the other ridesharing efforts already underway. The goal of the TSM program is to increase transit, carpool, bike and walk trips by 10 percent.

Several programs in the *Plan* would support the goals of the TSM plan including the parking management program, the transportation services fee, bicycle parking requirements, transit amenity requirements, construction of additional bus shelters, posting of transit route maps and schedules, and provision of carpool and vanpool spaces

Intersection Improvements. Several minor traffic improvements to the existing transportation system aimed at providing an overall LOS of D for most movements at all intersections were included in the *Downtown Plan*.

Shattuck and Durant. The southbound left-turn movement at this intersection under the current signal phasing would operate at LOS F during the PM peak hour under all four alternatives as analyzed in this report. The modification of the current signal phasing to allow for a left-turn phase on Shattuck would improve the projected LOS to a C/D for all southbound movements.

University and Oxford. Based on the current intersection lane configuration and signal timing, the northbound left-turn and the eastbound right-turn would operate at LOS F and E, respectively. The addition of a left-turn phase in the eastbound direction (University Avenue) would improve the eastbound right-turn LOS. However, the LOS in the northbound and southbound directions would worsen due to the additional greentime needed in the east/west directions to accommodate the eastbound left-turn phase.

Shattuck between Center and University. Congestion problems currently exist in the east/west directions along University, Addison and Center between the one-way couplet formed by northbound (Shattuck Square) and southbound Shattuck. Eliminating this the one-way couplet between Center and University by converting southbound Shattuck to two-way traffic would eliminate the current congestion problems.

The implementation of two-way traffic on Shattuck would likely mean the elimination of on-street parking between University and Center and might require the reduction of sidewalk width. Additionally, it might require that left-turn movements be restricted along the two-way section of Shattuck at University, Addison and Center. This would lead to a substantial change in current traffic flow through the Downtown.

The present Shattuck northbound (Shattuck Square) could then be transformed into a pedestrian mall or transit mall, or parking could be allowed along Shattuck northbound with egress restricted to right-turns only onto Addison and University. The *Downtown Plan* includes this program as one to be studied.

#### **Additional Mitigation Measures Recommended by this EIR**

##### **Mitigation for Policies and Programs**

Remaining Impact 1: No implementation for Policies 2.3, 5.3, 5.4<sup>42</sup> in the Circulation and Transportation Element of the *Plan*. [◉]

Mitigation Measure: The implications and implementation of *Policy 2.3* should be studied further by the City within the context of the City-wide transportation study. This study should examine overall circulation issues for Berkeley which would include the accommodation of through traffic. Specifically, streets that are designated to accommodate through traffic should be designed to encourage their use as such. Maximizing the operating efficiency of intersections and coordinating traffic signals along such routes would encourage their use.

It is possible that decisionmakers in Berkeley could decide that this policy should not be implemented because the restriction of through traffic in the Downtown would shift this traffic to adjacent streets of which many are residential.

<sup>42</sup> These policies are:

Policy 2.3: Divert through auto traffic from the Downtown core to peripheral streets without impacting residential areas.

Policy 5.3: Provide mid-block pedestrian pathways where feasible to shorten pedestrian walking distances.

Policy 5.4: Design a pedestrian network which responds to the access needs of the physically disabled.



*Policy 5.3* should be addressed in ordinance and regulation changes and studies. Mid-block pedestrian pathways could be incorporated into the design of projects. A development bonus could be developed to encourage the inclusion of such pathways in project design. The City should provide design guidelines as to where such pathways would be desirable. This should be addressed in the Urban Design section of the *Plan*.

*Policy 5.4* is addressed in existing City codes relating to access for disabled persons. All intersections should include at least one ramp at each corner.

Remaining Impact 2: Exemption of new retail uses and changes in use to retail from the level of service (LOS) standard. [⊙]

Mitigation Measure: Include all land uses in the LOS standard requirement. Retail uses should not be exempted, otherwise non-retail developments could be required to provide more than their pro rata share of the required mitigation cost.

Remaining Impact 3: The LOS standard does not indicate if it applies to individual turn movements or overall intersection operation. [Ø]

Mitigation Measure: Discussions with City staff suggest that the overall intersection operation should be used as the standard. The *Plan* should be clarified to indicate this.

Remaining Impact 4: Method of funding intersection improvements. [⊙]

The *Plan* includes a method of applying the level of service standard and funding requirements to each successive development. New construction, additions or changes in use causing intersection levels of service to fall below D would be required to mitigate such impacts. However, existing development would not have contribute. Developments coming after intersection level of service falls to E would have to pay the entire improvement cost to improve the LOS to D. The elimination of retail from the LOS standard would exacerbate this problem and could require future developments to mitigate development impacts of retail projects.

It should be noted that this approach is frequently used by cities to fund improvements except that most do not exclude major traffic generating land uses such as retail from the program.

Mitigation Measure: By including retail land uses as recommended above, the standard would be more equitable.

The *Downtown Transportation Study* recommended that the LOS standard be applied slightly differently. It proposed that if a development would change the LOS to E or worse at an intersection within 1,000 feet of the project, mitigation would have to be developed that would improve the LOS to D. If the LOS without the project were worse than D to begin with, then, at a minimum, the LOS would have to be maintained. Using this approach could cause levels of service to gradually worsen as future growth in through traffic could push the LOS over the D standard and there would be no mechanism to mitigate it back to D. It also does not correct the condition of only the last development contributing to the mitigation improvement.

A more equitable method of assigning responsibility for mitigation would be to develop a transportation improvement fee that reflects future transportation improvements needed to serve a specified future development level. The Citywide transportation study will identify these needed improvements and will define mitigation measures required to support the

future level of projected development. The costs of implementing the mitigation measures could be calculated and summed, and the cost per trip developed. Any new project could pay a transportation improvement fee based upon an estimate of its trip generating potential. This could be implemented for the City as a whole and/or for separate zones within the City such as the Downtown, and would more equitably distribute the responsibility of payment for mitigations.

A traffic study estimating the individual trip generation potential of proposed projects would be required for each proposed development as local traffic impacts of the project (e.g., site access and parking) would still have to be studied.

The citywide transportation study and the fee would have to be updated and reassessed regularly to reflect changes in assumptions on future development.

Remaining Impact 5: No time was identified for taking the level of service traffic counts. [Ø]

Mitigation Measure: The traffic counts used to monitor the level of service D performance criteria should be taken at the same time from one year to the next. They should be taken when the University is in session and during a relatively active time for retail uses.

Remaining Impact 6: Reduction of parking ratio would produce additional demands on parking supplies and impact adjacent residential neighborhoods. [⊙]

Mitigation Measure: To minimize the impacts of this shortage, the following should be considered:

- ☐ The existing parking ratio of 2.0 spaces per 1,000 square feet could be maintained.
- ☐ The parking management plan must be developed to adequately address the issues of providing short term parking for customers and visitors. This is independent of the parking ratio but becomes more critical as ratios are reduced.
- ☐ The residential permit parking boundaries may need to be extended. This is also independent of the parking ratio but becomes more critical as supplies diminish.

Remaining Impact 7: Parking ratio is not identified as maximum allowable, a minimum or fixed standard. [Ø]

Mitigation Measure: Clarify text of the *Plan* to indicate that it is a fixed standard.

Remaining Impact 8: Exemption from parking requirement for changes in use to retail, or new retail uses of 100,000 square feet or more. [⊙]

The deficit associated with this policy could be as high as 800 spaces for the Maximum Bonus Alternative.

Mitigation Measure: Either the exemption should not be granted or the City should develop a plan to fund the construction of the spaces required to support this type of development. It is highly unlikely that private retail development of this scale would occur without provision for accommodating nearly its market demand for parking.



If the retail parking exemption is retained, the text of the *Plan* should be clarified to indicate that the retail exemption only applies to core developments with 100,000 square feet or greater. The text is occasionally unclear whether all retail would be exempt.

Remaining Impact 9: Parking in-lieu fees do not reflect actual costs of providing parking or include a factor for escalation of costs. The transportation services fee does not include an factor to reflect inflation. [◐]

Mitigation Measure: The in-lieu parking fee should be evaluated to assess if it truly represents the costs that could be incurred by the City. However, this full cost allocation should be counter-balanced by the goal to develop public facilities rather than private facilities (over which the City would have less control), as parking management and TSM strategies can be incorporated more easily in a public facility. With this counter-balancing, and regardless of the results of the cost analysis, the City may decide to reduce the in-lieu fees to encourage developers to use this approach.

The program should include an escalation factor to reflect inflation for in-lieu and transportation services fees. The *Downtown Transportation Study* recommended that the fee be increased whenever the consumer price index increases by 25 percent.

Remaining Impact 10: There is no program that identifies how the parking facilities would be built using in-lieu fees or where they would be located. [◐]

Mitigation Measure: The in-lieu fee program should be addressed as a part of the Citywide transportation study and the parking management study that will be included in that study. It could also be addressed in the parking feasibility study called for in the *Plan*.

The location of parking should also be determined for the interim period prior to garage construction but after demands from the uses that generated the fees are being felt in other public facilities. In the *Downtown Transportation Study*, it was recommended that attendant parking be implemented to provide the needed spaces on an interim basis during this period.

The location(s) should be determined in the parking feasibility study.

Remaining Impact 11: Unclear whether proposed Downtown parking facility would add a net increase of 300 spaces. [◐]

Mitigation Measure: Discussions with staff indicate that a net increase of 300 spaces (including the replacement of existing onsite spaces) would be provided. Clarify in *Plan*.

Remaining Impact 12: Funding for shuttle service to satellite parking lots not identified. [◐]

The *Plan* refers to possible assessment district financing.

Mitigation Measure: Include long-term funding analysis for the shuttle service in the Satellite Parking Study.



Mitigation Measures to Impacts Produced by the Alternatives

Remaining Impact 13: Under the Maximum Bonus Alternative, the Milvia/University intersection would operate at LOS E with all westbound movements operating at LOS F. [⊙]

Mitigation Measure: The east approach could be restriped to provide a left turn lane by eliminating some curb parking and reducing the width of the median. Alternatively, left turns could be prohibited during the PM peak period. Each method of mitigation would improve both the overall LOS to B and the westbound approach LOS to B.

Remaining Impact 14: The Martin Luther King/University intersection is projected to operate at an overall LOS of D with the northbound left turn operating at F for all alternatives. [⊙]

Mitigation Measure: The length of time programmed into the exclusive left turn phase could be increased to improve the left turn LOS. However this would increase delay for most other movements and produce a reduction in the intersection's overall level of service. This mitigation is therefore not recommended.

Remaining Impact 15: The northbound movements at the Milvia/Center intersection are projected to operate at LOS E and F for the Base Plan and Maximum Bonus Alternatives, respectively. This is due to the single approach lane which must serve all movements. [⊙]

Mitigation Measure: A separate left turn lane could be added to the south approach without eliminating any curb parking. However this may produce too much of a jog in the alignment of the southbound through lane across the intersection. A better mitigation might be to eliminate some curb parking on the east side of the south leg instead. Adding the separate left turn would improve the LOS on the south approach to B.

Remaining Impact 16: The Shattuck and Allston intersection is projected to operate at LOS E or F in the east/west directions. Additionally, the southbound left-turn is projected to operate at LOS F under the Maximum Bonus Alternative. [⊙]

Mitigation Measure: The LOS could be improved in the east and west directions by constructing eastbound and westbound right-turn lanes. This would require the elimination of some on-street parking along the eastbound and westbound approaches but would improve the LOS to a C or better. The southbound left-turn under the Maximum Bonus Alternative could be improved to LOS C or better by altering the signal phasing to allow for a left-turn phase in the north/south direction.

Remaining Impact 17: The Shattuck and Kittredge intersection is projected to operate at an overall LOS of C or better under all of the analyzed alternatives but the westbound approach to this intersection is projected to operate at LOS F under the Maximum Bonus Alternative. The poor operating conditions for this one approach would be due to the single approach lane to the intersection in the westbound direction. [⊙]

Mitigation Measure: The addition of a westbound left-turn lane would improve the intersection operating conditions to a LOS C/D. The implementation of this mitigation would require the elimination of parking along the westbound approach to accommodate the additional lane.

Remaining Impact 18: The implementation schedule of the signalization of unsignalized intersections is unknown due to the uncertainty of development phasing in the Downtown. [○]

Mitigation Measure: The unsignalized intersections should be included in the traffic monitoring program and signal warrants should be applied to determine when and if signalization should be implemented. It is likely that they will only be required if a major project were located on the minor street in each case. Funding for these signals should be the responsibility of new developments when the signal would directly benefit them.

Remaining Impact 19: Levels of service at the approach corridors to the Downtown would continue to operate at capacity. [⊙]

Mitigation Measure: The projected increase in vehicle traffic volumes could be reduced by 10 percent by the implementation of the TSM program in the *Plan*. From a regional perspective, infill development of an urban area like Downtown Berkeley would have a beneficial effect on all infrastructure, including the transportation network.

Remaining Impact 20: The exemption of retail uses from the LOS requirement and selected exemption from parking requirements would produce conditions that others entities, such as the City and other non-retail developments, would have to mitigate. [⊙]

Mitigation Measure: Develop a parking requirement for retail uses and require that they also meet the LOS standard.

## AIR QUALITY

### Existing Setting

The climate of the Berkeley area is characterized by mild, wet winters and warm, dry summers. Maximum monthly summertime temperatures average approximately 70°F, while minimum monthly winter temperatures average in the low 40°F range. Extreme high temperatures occasionally exceed 100°F, while the coldest wintertime temperatures fall to near freezing (32°F). Precipitation in the area is highly seasonal. Roughly 95 percent of the 23 inches of annual precipitation falls between October and April.<sup>43</sup> While being virtually free of any significant precipitation, the summer weather is dominated by the moderating influences of coastal fog. Typically, strong on-shore flow in the late afternoon carries low-level coastal stratus through the Golden Gate and directly into the Berkeley area. The fog generally persists until the following morning, when it recedes. There are also periods when the fog does not dissipate during the day, occasionally resulting in several consecutive days of foggy conditions.

Measurements at the Alameda Naval Air Station indicate that predominant winds in the north Oakland/Berkeley area are from the west, with an annual average wind speed of 11 miles per hour. Calm conditions occur roughly 10 percent of the time. Winds in the Downtown Berkeley area are likely to be somewhat different from those measured at Alameda due to its location directly east of the Golden Gate and the influences of the nearby East Bay hills.

In order to estimate ambient air quality levels in the vicinity of Downtown Berkeley, data compiled by the California Air Resources Board (CARB)<sup>44</sup> were examined, along with information compiled by the Bay Area Air Quality Management District (BAAQMD).<sup>45</sup> Unfortunately, no routine ambient air monitoring data are available for the Berkeley area. However, data collected from 1984 through 1986 in Oakland and Richmond are presented in Table 31. While not directly applicable to Berkeley, these data do provide a good indication of ambient levels in urbanized East Bay locales. These data indicate that, with the exception of ozone and inhalable particulates, ambient levels in the Oakland/Richmond area are below applicable state and federal standards. Ozone levels in Oakland met or exceeded the state and federal ozone standards in 1984 and 1985. Estimated particulate matter (PM<sub>10</sub>) concentrations indicate levels which are near the state 24-hour and annual standards.

Because the project could impact ambient carbon monoxide (CO) concentrations by creating increased automobile exhaust emissions, CALINE4 dispersion modeling was performed.

Using existing traffic volumes and emission factors given by BAAQMD (1985), emissions were calculated for peak hour traffic traveling 20 miles per hour (mph). The model was run using assumed worst-case meteorology which included a low wind speed (0.5 meters/second) and very stable conditions. The wind directions were varied about the compass at ten-degree increments, for a total of 36 wind directions, for which short-term (one hour) CO concentrations were calculated. For modeling purposes, 20 theoretical receptors were placed in the Downtown Berkeley area, near the project, and generally located with fifteen meters of the roadside.

---

<sup>43</sup> National Oceanic and Atmospheric Administration, 1982, Monthly Normals of Temperature, Precipitation and Heating and Cooling Degree Days: 1951-1980, September.

<sup>44</sup> State of California Air Resources Board, California Air Quality Data, 1984, 1985, 1986.

<sup>45</sup> Bay Area Air Quality Management District, Air Quality and Urban Development Guidelines for Assessing Impacts of Projects and Plans, November 1985.



Table 31

Maximum Ambient Air Quality  
Levels Measured at Oakland and Richmond

Pollutant Averaging Period	1986		1985		1984		State Standard	Federal Standard	Units
	Oakland	Richmond	Oakland	Richmond	Oakland	Richmond			
Ozone (O <sub>3</sub> )									
1-hour	0.09	0.07	0.12	0.09	0.11	0.09	0.10	0.12	ppm
Carbon Monoxide (CO)									
1-hour	12.00	8.00	9.00	8.00	11.00	8.00	20.00	35.00	ppm
8-hour	2.50	5.60	5.80	4.30	8.00	4.80	9.00	9.00	ppm
Nitrogen Dioxide (NO <sub>2</sub> )									
1-hour	NM	0.13	NM	0.11	NM	0.15	0.25	NE	ppm
Annual	NM	0.021	NM	0.021	NM	0.021	NE	0.05	ppm
Sulfur Dioxide (SO <sub>2</sub> )									
1-hour	NM	0.04	NM	0.05	NM	0.10	0.25	NE	ppm
3-hour	NM	NR	NM	NR	NM	NR	NE	0.50	ppm
24-hour	NM	0.007	NM	0.012	NM	0.016	0.05	0.14	ppm
Annual	NM	0.001	NM	0.001	NM	0.001	NE	0.03	ppm
Total Suspended Particulate (TSP) <sup>a</sup>									
24-hour	NM	85.00	NM	132.00	NM	128.00	100.00	150.00	ug/m <sup>3</sup>
Annual	NM	37.80	NM	58.40	NM	57.40	50.00	60.00	ug/m <sup>3</sup>
Inhalable Particulate (PM <sub>10</sub> ) <sup>b</sup>									
24-hour	NM	47.00	NM	73.00	NM	70.00	50.00	150.00	ug/m <sup>3</sup>
Annual	NM	20.80	NM	32.10	NM	31.60	30.00	50.00	ug/m <sup>3</sup>

NM = not measured.

NE = no standard established for averaging period.

Source: State of California Air Resources Board (CARB), California Air Quality Data, Summary of Air Quality Data, Annual summaries for 1984, 1985, 1986. Aerometric Data Division.

Results of the modeling for existing conditions are given in Table 32 and show that neither the California nor the federal CO standards are being violated. The eight-hour impacts were assumed to equal 70 percent of the one-hour impacts.<sup>46</sup>

Table 32

Maximum Background CO Concentrations  
in the Berkeley Downtown Plan Study Area  
(parts per million)

<u>Averaging Period</u>	<u>Maximum Impact</u>	<u>Standards</u>	
		<u>California</u>	<u>Federal</u>
One Hour	10.4	20.0	35.0
Eight Hour	7.3	9.0	9.0

Source: Engineering-Science, Inc.

The BAAQMD is responsible for regulating the emissions of air pollutants in the San Francisco Bay Area. As a result, all phases of the downtown redevelopment would be required to comply with all applicable BAAQMD rules and regulations. Since some of the sites slated for redevelopment within the Downtown are located at or adjacent to locations of underground storage tanks or areas contaminated by leaking underground storage tanks, removal/clean-up practices would be required to comply with BAAQMD Regulation 8, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks. Development activities would also be required to comply with all applicable rules and regulations of the U.S. Environmental Protection Agency (EPA) and the California Department of Health Services (DOHS).

**Policies and Programs Significantly Affecting Air Quality**

Insure Adequate Vehicular Access to/from and within the Downtown Area. By providing good access to/from and within the Downtown for single occupant vehicles (SOVs), the potential would exist for highly congested conditions. With long delays due to diminished Level of Service (LOS), vehicular exhaust emissions in the downtown area would increase.

Create Safe and Convenient Pedestrian Access to/from and within the Downtown Area. Encouraging pedestrians to use the Downtown could result in beneficial air quality impacts by reducing traffic levels (and associated emissions). However, it could also result in potential air quality problems. With an influx of more pedestrians would come the potential for increased vehicular traffic/pedestrian conflicts. In such instances, vehicular traffic could be impeded and the resulting delays would result in increased air emissions. A careful integration of the pedestrian access and vehicle access goals of the plan is essential in assuring that air quality levels would not worsen in the downtown area.

Provide Safe and Convenient Bicycle Use as a Means of Transportation. Encouraging bicycle use could result in benefits to air quality through a decrease in the use of automobiles. As with the goal of making the Downtown convenient for pedestrian traffic, careful planning is necessary to ensure that bicycle and automobile traffic is integrated in a manner that would result in minimal bicycle/automobile conflicts.

<sup>46</sup> Medurski, T., Carbon Monoxide Hot Spot Guidelines, Volume III: Workbook, EPA 450/3-78-035, 1978.

## Impacts Due to New Development Allowable Under the Plan

Impacts Common to One or More Alternatives. Two categories of impacts are addressed below: construction period emissions and vehicular emissions.

Construction Impacts. All alternatives allow for continued development which may include demolition of existing structures, excavation and grading.

Demolition may require the use of heavy equipment which would emit hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NOx), sulfur oxides (SOx) and total suspended particulates (TSP). Large amounts of fugitive dust are also likely to be emitted during the process. Older buildings may have been constructed using asbestos-containing materials. Improper destruction or removal of asbestos-containing materials would represent a significant air quality impact.

Particulates would be the primary pollutant associated with excavation and grading activities. Additionally, heavy equipment, which could be used for excavation, would emit HC, CO, NOx, SOx and TSP.

All 24 parcels listed in the *Downtown Plan* area as having additional development potential are located on or adjacent to a site with historical hazardous material use. In addition, seven of these parcels are located on or adjacent to identified contamination sites on file with regulatory agencies, or sites of registered underground storage tanks (see section of this EIR titled *Toxics and Hazardous Waste*). The possibility exists of encountering contaminated soils during construction excavation and subsequently releasing these hazardous materials into the air.

Traffic Impacts. The major air quality impacts associated with development of downtown Berkeley would be emissions from increased automobile traffic. Automobile traffic will generate CO, HC, NOx, TSP and SOx. Carbon monoxide will be generated in the largest quantities. BAAQMD recommends the use of dispersion modeling to predict the worst-case ambient CO concentrations which would result from motor vehicle emissions. The CALINE4 model, used to estimate existing conditions, was again used with the same parameters to calculate the CO concentrations for each of the alternatives. Emissions of HC, SOx, NOx and TSP were calculated based upon vehicle miles traveled.

Traffic Emissions Impacts of the Four Alternatives Compared. The projected traffic volumes associated with each alternative (see *Transportation* section of this EIR) were used to estimate the total increase in CO concentrations. As shown in Table 33, neither the California or the federal standards would be exceeded for Alternatives 1, 2 or 4. Therefore, traffic emissions impacts are not considered significant for these alternatives. The California and federal eight-hour standard for CO would be reached though not exceeded in the case of Alternative 3, a potentially significant impact. The one-hour impacts for Alternative 3 would be well below the one-hour standards.



Table 33

Maximum CO Concentrations of Alternatives  
(parts per million)

<u>Averaging Period</u>	<u>Maximum Impact</u>				<u>Standards</u>	
	<u>No Action</u>	<u>Base Plan</u>	<u>Maximum Bonus</u>	<u>Low Intensity</u>	<u>California</u>	<u>Federal</u>
One Hour	12.1	12.2	12.9	11.5	20.0	35.0
Eight Hour	8.5	8.5	9.0	8.0	9.0	9.0

Source: Engineering-Science, Inc.

The net amounts of HC, SO<sub>x</sub>, NO<sub>x</sub> and TSP that would be generated by each alternative were also calculated and are compared to total Alameda County emissions in Table 34.

Impacts of HC and NO<sub>x</sub> are considered significant under BAAQMD guidelines for Alternatives 1, 2 and 3.<sup>47</sup> In addition, TSP emissions are significant under Alternative 3. Impacts generated by Alternative 4 would not be significant under BAAQMD guidelines.

Table 34

Vehicular Traffic Emissions  
in the Berkeley Downtown Plan Study Area  
(tons per day)

<u>Pollutant</u>	<u>Amount Emitted</u>				<u>Alameda County Total Emissions</u>
	<u>No Action</u>	<u>Base Plan</u>	<u>Maximum Bonus</u>	<u>Low Intensity</u>	
Hydrocarbons (HC)	0.15	0.17	0.28	0.07	121
Nitrogen Oxides (NO <sub>x</sub> )	0.12	0.14	0.23	0.05	79
Sulfur Oxides (SO <sub>x</sub> )	0.02	0.02	0.04	0.01	14
Particulates (TSP)	0.22	0.26	0.42	0.10	100

Source: Engineering-Science, Inc.

**Public Improvements or Program Mitigation Measures Included in the Plan**

The *Downtown Plan* calls for the establishment of a street cleaning program. An aggressive street-cleaning program would reduce TSP generated by vehicular traffic, mitigating the impacts of construction-generated dust and the increased resuspension of particulate matter by increasing vehicular traffic.

In addition, the following three policies (supported by various programs throughout the *Plan*) could have a mitigatory effect on air quality.

<sup>47</sup> See Footnote 45.

Encourage the Use of Transit as the Primary Mode of Travel. Increased usage of public transit to and within Downtown Berkeley would result in a decrease in automobile usage and its associated air pollution emissions. With less automobile traffic in Downtown, congestion would be diminished, thus minimizing automobile exhaust emissions.

Create Adequate Parking Facilities to Support Land Use Policies for the Downtown Area. By increasing the availability of short-term parking on the periphery of the Downtown, traffic volume and congestion in the downtown core would be decreased. With this decrease in traffic levels and congestion, there would be an associated decrease in air pollutants released from vehicle exhaust.

Decrease Single Occupant Vehicle Trips. Decreasing single occupant vehicle (SOV) trips through the use of alternate means of transportation would be beneficial to air quality in the downtown area.

#### Additional Mitigation Measures Recommended by this EIR

##### Remaining Impact 1: Fugitive Emissions from Demolition [⊙]

Mitigation Measure: To abate dust emissions, demolition should be scheduled to take place on days with low wind speeds. Materials should be wetted before they are removed, if it is feasible to do so. All buildings should be inspected prior to demolition for asbestos-containing materials (ACM). All ACM should be removed and properly disposed of before demolition is begun. If ACM is discovered during demolition, all activity on site should be discontinued until all proper safety procedures can be implemented by qualified personnel. All rules under the National Emission Standards for Hazardous Air Pollutants should be strictly adhered to.<sup>48</sup>

##### Remaining Impact 2: Emissions Associated with Construction [⊙]

Mitigation Measure: Water trucks or sprinkler systems should be used to dampen exposed dirt in the late morning and at the completion of work each day. Vehicles leaving the area should be washed off. Trucks hauling soil from an excavation site should be covered. Watering frequency should increase whenever wind speeds exceed 15 mph.

Additionally, all equipment used on site should be properly tuned and maintained to reduce diesel combustion emissions. No equipment should be left idling when not in use.

##### Remaining Impact 3: Potential for Releasing Hazardous Materials into Ambient Air [⊙]

Mitigation Measure: Each proposal for demolition and/or new construction must be evaluated for the potential of releasing hazardous materials into the air. Land use and excavation plans should be reviewed. Estimates of emissions of toxic air pollutants should be calculated and a health risk assessment should be performed. Both acute (short-term) and long-term (carcinogenic) risks should be addressed. The U.S. EPA, Office of Solid Waste, has information on quantifying emissions from excavation sites. Toxic air emissions could be modeled to determine exposure profiles and then compared with health effect levels. Whenever possible, all hazardous material should be removed before construction is begun.

<sup>48</sup> National Emission Standards for Hazardous Air Pollutants, 40 CFR 61, Part M.

#### Remaining Impact 4: Traffic Emissions [⊙]

Mitigation Measure: Traffic signals should be timed to allow a smooth flow of traffic wherever possible. Car pooling and van pooling should be encouraged by employers. Bicycle lanes should be established and bike lockers installed. Employers should install showers and locker facilities to encourage their employees to bicycle or walk to work. Employees should be encouraged to use transit systems and transit system schedules should be adjusted as necessary to meet peak demand. Car pooling should be encouraged and, to the extent feasible, employers should schedule employees so they do not arrive or depart during peak hours.

#### NOISE

##### Setting

The existing noise environment in Downtown Berkeley is typical of many urban communities. The major sources of noise are buses, cars, trucks and motorcycles. Additional noise is generated by miscellaneous community sources, retail and commercial uses.

Sensitive Receptors. Noise-sensitive receptors, such as schools, residences and other public buildings are mainly located south of University Avenue. The locations of these noise sensitive receptors are shown in Figure 37.

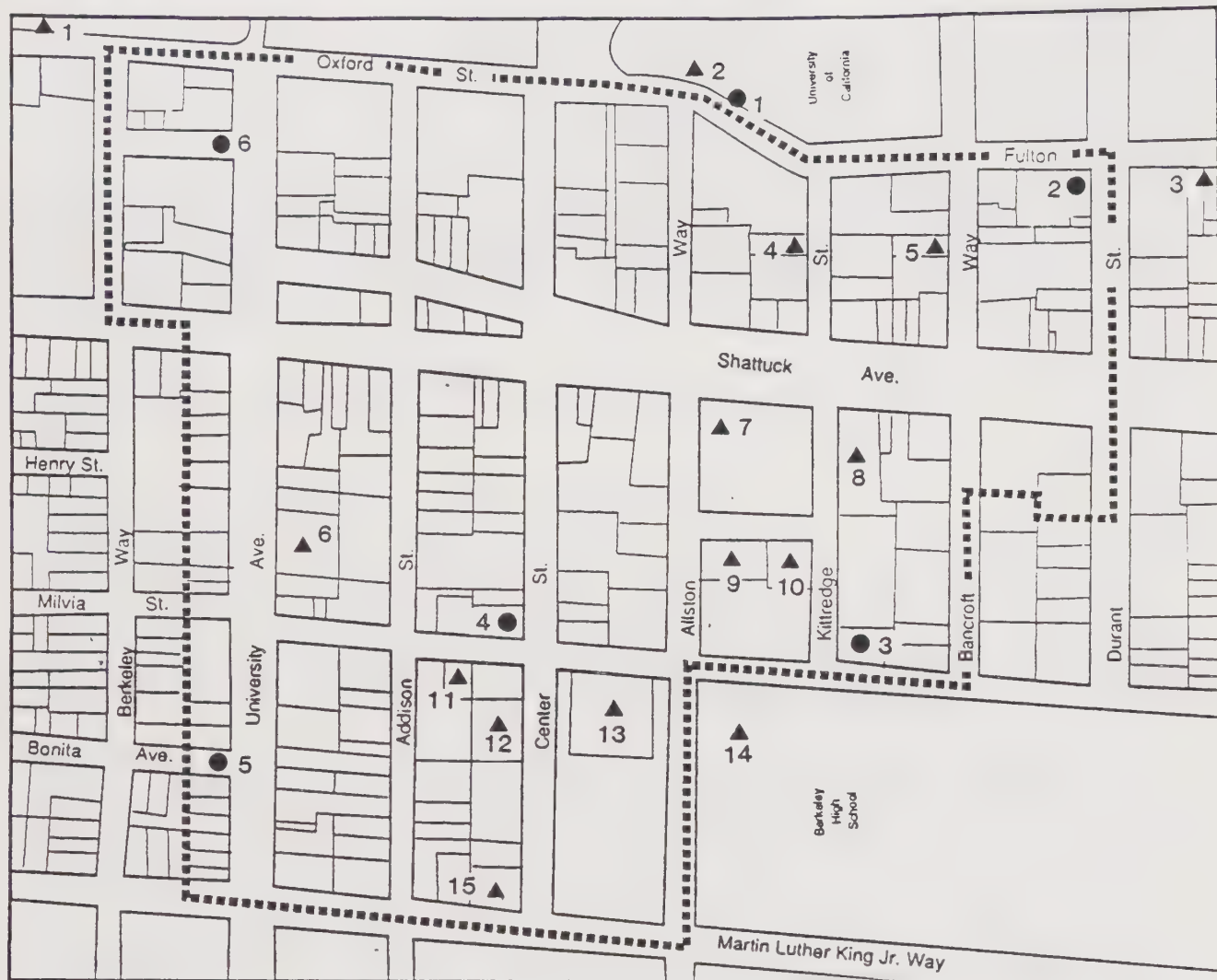
The administration building of the University of California is located approximately 50 feet east of Oxford Street and two residential complexes above retail businesses are located approximately 100 feet west of Oxford Street. The Stark Residential Hotel is located approximately 100 feet south of University Avenue; next door is the Campanile Hotel. Another residential hotel (Shattuck Hotel) and Berkeley City Hall are located 100 to 125 feet west of Shattuck Avenue. Buildings of the Armstrong College and Dickenson Warren Business College are approximately 170 feet east of Milvia Street. Vista College buildings and American Language Academy are located 100 and 170 feet south of Addison Street, respectively. The Martin Luther King, Jr. Civic Center Building is located approximately 125 feet south of Center Street, and Berkeley High School is located approximately 50 feet south of Allston Way. The residential neighborhood nearest the study area is located approximately 145 feet north of Berkeley Way. Another residential neighborhood is located approximately 170 feet south of Durant Avenue.

Measurement Sites. Figure 37 also shows the location of six sites where ambient noise measurements were taken.

Site 1 is located directly in front of Parcel 21, just west of the U.C. Berkeley athletic facility and south of the Good Earth Restaurant on Oxford Street at Allston Way. Other parcels in the vicinity include 15, 16, 17 and 20. Sensitive receptors in this area include residences located above commercial and retail businesses and a residential hotel located on Shattuck Avenue between Allston Way and Kittredge Street, about one-quarter mile from Parcel 21.

Site 2 is located south of the Fulton and Durant Street intersection adjacent to Parcel 24. Currently, Parcel 24 is a used car lot. This parcel is located north of an established residential neighborhood, one-half block south of the Fulton and Durant Street intersection. Residences within one block of Parcel 24 would be considered sensitive receptors.





▲ SENSITIVE RECEPTORS

NUMBER LOCATION

- |       |                                       |         |   |
|-------|---------------------------------------|---------|---|
| 1     | RESIDENTIAL NEIGHBORHOOD              | 8       | BERKELEY CITY LIBRARY                                   |
| 2     | ADMINISTRATION BUILDING, UCB          | 9 & 10  | ARMSTRONG COLLEGE AND DICKENSON WARREN BUSINESS COLLEGE |
| 3     | BEGINNING OF RESIDENTIAL NEIGHBORHOOD | 11 & 12 | VISTA COLLEGE   |
| 4 & 5 | RESIDENCE ABOVE COMMERCIAL            | 13      | MLK JR. CIVIC CENTER BUILDING                           |
| 6     | STARK RESIDENTIAL HOTEL               | 14      | BERKELEY HIGH SCHOOL                                    |
| 7     | SHATTUCK RESIDENTIAL HOTEL            | 15      | AMERICAN LANGUAGE ACADEMY                               |

● NOISE MEASUREMENT LOCATIONS



**Figure 37**  
**Noise Measurement Locations**  
**and Sensitive Receptors**

Site 3 is located south of the Milvia and Kittredge Street intersection directly adjacent to Berkeley High School. This area has intermittent noise increases due to activity produced by Berkeley High School students during breaks and at lunch time. The high school is considered a sensitive noise receptor.

Site 4 is located north of the Center and Milvia Street intersection. The parcels located near the noise measurement site are 7, 9, 13, 14, 18 and 19.

Site 5 is located on the north corner of Bonita Avenue at University Avenue close to parcels 5, 8, 10, 11 and 12. One block to the north of University is a residential neighborhood which would be considered a sensitive noise receptor.

Site 6 is located at the east corner of Walnut Street and University Avenue, approximately 50 feet from University Avenue near Parcels 1, 2, 3, 4 and 6. A residential neighborhood lies to the north of Parcels, 1, 2, 3, 4 and 6.

Ambient Sound Level Measurements. For assessing the sound levels in a community, it is common practice to compute the energy equivalent sound level ( $L_{eq}$ ), which is a measure of the average sound energy over a given time period.<sup>49</sup> The City of Berkeley has recommended the use of ( $L_{eq}$ ), to identify the noise impact of projects on the community. Therefore, ( $L_{eq}$ ) is used here to characterize existing and future noise conditions in the project area.

To assess the existing noise environment in the project area, measurements at six locations were conducted on 16 September 1988, using a Quest Electronics Model 155 Impulse Precision Sound Level Meter. A one-inch, random-incidence pressure microphone (Model 7023) was used with this meter. The instrument was calibrated before and after each measurement period using a Quest CA-22 Calibrator. All measurements were made at a microphone height of 5 feet above ground. Measurements were conducted during daytime hours (between 9 AM and 4 PM). Sound level measurements were made at each site for ten minutes. During this measurement period, instantaneous A-weighted sound levels were read at regular intervals. The ( $L_{eq}$ ) value for a ten-minute measurement period was calculated from the measured data.

Table 35 shows the ( $L_{eq}$ ) values measured at each site. The measured ambient levels at all six sites are higher than the acceptable limit of 65 dB for commercial developments. These levels can also be taken as the representative daytime equivalent levels. Noise levels would be lower during nighttime.

Noise levels typical of other indoor and outdoor environments are indicated in Appendix D. Also shown are expected responses from people toward various levels of noise, ranging from the threshold of hearing, near 0 dB, to the threshold of physical discomfort in the ear, about 120 dB. Noise levels in urban areas typically average 60 dB, and in rural areas they may reach as low as 30 dB.

---

<sup>49</sup> The ( $L_{eq}$ ) is an A-weighted sound level measured in decibels (dB). The A-weighted scale is a method of electronically combining sound levels measured at different frequencies in a manner similar to the human hearing process. To characterize the noise environment over a 24-hour period, the ( $L_{eq}$ ) is computed separately for daytime hours (7 AM to 7 PM), evening hours (7 PM to 10 PM) and nighttime hours (10 PM to 7 AM). Penalties of 5 and 10 dB are added to evening ( $L_{eq}$ ) and nighttime ( $L_{eq}$ ), respectively to account for the more sensitive response of persons to sounds in the evening and at night.

Table 35

Noise Measurements  
Berkeley Downtown Plan Study Area

<u>Location</u>	<u>Time<sup>a</sup></u>	<u>Leq<sup>b</sup></u>
1. Allston Way at Oxford St.	9:15 AM	70
2. Fulton St. at Durant St.	10:16 AM	71
3. Kittredge St. at Milvia St.	10:57 AM	69
4. Center St. at Milvia St.	1:12 PM	69
5. Bonita Ave. at at University Ave.	2:05 PM	67
6. Walnut St. at University Ave.	3:04 PM	67

<sup>a</sup> Starting time for ten-minute measurements.

<sup>b</sup> The equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy as the time-varying sound level during the same time period.

Source: Engineering-Science, Inc.

Criteria for Evaluating Noise Impacts. The impact of project generated noise can be assessed by considering criteria such as the disruption of speech and sleep, the general increase in annoyance to residents and employees and the perceived change in ambient sound levels. Community noise standards applicable to this project are provided in the City of Berkeley *Noise Ordinance*.<sup>50</sup> According to this ordinance, the 30-minute average sound level in the commercial areas should not exceed 65 dB during any hour of daytime (7 AM - 10 PM) and 60 dB during nighttime (10 PM - 7 AM). However, in residential areas (Zone R-3), the recommended limits for noise levels are 60 and 55 dB during daytime and nighttime, respectively.

The City of Berkeley has also established noise standards for interior noise for multifamily residential dwellings and construction period noises. According to these standards, the allowable interior noise levels for multifamily residential dwellings are 40 and 45 dB during nighttime and daytime, respectively. The State of California has also recommended that the interior noise levels, attributable to exterior sources, shall not exceed 45 dB CNEL in any habitable room with all doors and windows closed.<sup>51</sup> This standard applies to new hotels, motels, apartment houses and dwellings other than detached single family dwellings.

The Federal Highway Administration's *Federal Aid Highway Program Manual*, Volume 7, Chapter 7, Section 3 specifies a peak hourly ( $L_{eq}$ ) level of 67 dB for exterior noise level in residential areas, activity category B and 72 dB for exterior noise level in commercial areas, activity category C.<sup>52</sup> However, according to the California Department of Transportation (Caltrans), noise mitigation measures should be used when the predicted peak hour traffic noise level will increase by 12 dB over the ambient level and equals or exceeds the ( $L_{eq}$ ) level of 65 dB.<sup>53</sup>

<sup>50</sup> City of Berkeley, *Noise Ordinance*, 1982.

<sup>51</sup> (California Administrative Code, Title 25, Chapter 7, Subchapter 1, Article 4).

<sup>52</sup> U.S. Department of Transportation, Federal Highway Administration, *FHWA Highway Traffic Noise Prediction Model, Report FHWA-RD-77-108*, 1978.

<sup>53</sup> State of California, Caltrans, *Highway Design Manual, Chapter 1100, Highway Traffic Noise Abatement*



The City of Berkeley *Noise Ordinance*, restricts construction activity during different hours of the day. According to this Ordinance, no person shall perform any construction or demolition work between weekday hours of 7 PM and 7 AM, or between 8 PM and 9 AM on weekends or holidays such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City's Noise Control Officer. Also, the maximum sound levels during long-term construction (more than ten days) in the commercial and industrial areas should not exceed 70 dB during weekday operations (7 AM to 7 PM) and 60 dB on weekends and legal holidays (9 AM to 8 PM).

The City of Berkeley noise standards and limits are presented in Table 36.

Studies have shown that in addition to compliance with the above standards, noise impacts also should be assessed in terms of the perceived change in ambient sound levels. A change of 5 dB is considered noticeable and a change of 10 dB represents a doubling of perceived noise and could result in sustained complaints.

#### Impacts Due to New Development Allowable Under the Plan

Construction period impacts are addressed first, followed by operations period impacts.

Table 36

#### City of Berkeley Noise Standards Maximum Acceptable Noise Level (in dBA)

<u>Land Use Zone</u>	<u>7 AM - 10 PM</u>	<u>10 PM - 7 AM</u>
<u>Exterior</u>		
R-1, R-2	55	45
R-3 and above	60	55
Commercial	65	60
Industrial	70	70
<u>Interior</u>		
All Residential	45	40
		9 AM - 8 PM (Weekends & Holidays)
<u>Construction Period</u>	<u>7 AM - 7 PM</u>	
<u>Less than 10 days:</u>		
R-1, R-2	75	60
R-3 and above	80	70
Commercial/Industrial	85	70
<u>More than 10 days:</u>		
R-1, R-2	60	50
R-3 and above	65	55
Commercial/Industrial	70	60

Source: City of Berkeley Community Noise Ordinance, 1982 as amended.

Construction Impacts Common to One or More Alternatives. Construction activity at various parcels in the downtown area would temporarily increase the noise levels adjacent to construction sites. Normally, construction activities are carried out in stages and each stage has its own mix of equipment and noise characteristics. The maximum construction noise is generated during the operation of earthmoving equipment, such as bulldozers, backhoes and loaders (particularly the warning horns that sound as the vehicle backs up). A typical mix of the equipment to be used for this type of excavation and earth moving operation could include one front-end loader, one backhoe, one grader and two or more dump trucks. The highest calculated energy equivalent sound level ( $L_{eq}$ ) from construction activities of this mix of equipment would be about 85 dB at 50 feet from the center of the parcel under development.<sup>54</sup> This noise level is expected to decrease at the rate of 6 dB for each doubling of distance. Based on these estimates and measured existing noise levels, it is anticipated that construction noise from each of the four alternatives would be noticeable at the noise sensitive receptors located less than about 400 feet from each construction site.

Operational Impacts Common to One or More Alternatives. The main source of additional noise after construction activities in the Downtown would be the increase in traffic from businesses and residents. In order to assess the impacts of traffic noise on sensitive receptors, peak hourly noise levels were estimated at various receptor sites for five traffic scenarios. These five scenarios included: (1) existing traffic, (2) traffic under the No Action Alternative, (3) traffic under the Base Plan Alternative, (4) traffic under the Maximum Bonus Alternative and (5) traffic under the Low Intensity Alternative. Noise levels were estimated using the FHWA Highway Traffic Noise Prediction Model.<sup>55</sup> For these estimates, truck traffic volume was assumed to be 5 percent of the peak hourly total traffic volume. In addition, vehicle speeds were assumed to be 30 miles per hour. Peak hourly traffic volumes on various roads are discussed in the *Transportation* section of this EIR.

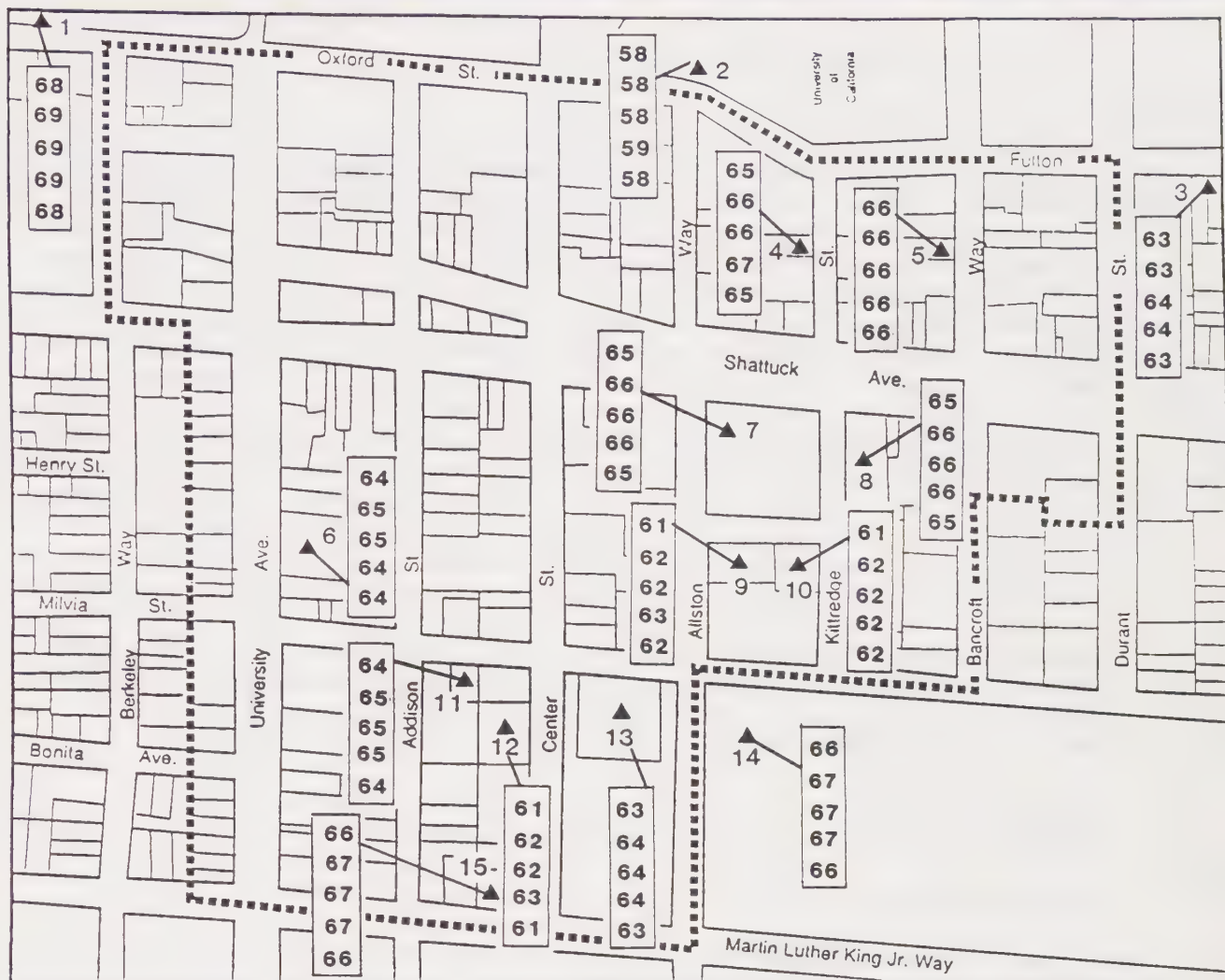
The estimated noise levels at the fifteen sensitive receptors for all five scenarios are shown in Figure 38. Results of the noise analysis indicate an increase in noise of between 1 dB and 2 dB at most of the selected receptors due to increased traffic. This increase would not be significant as noise increases of less than 3 dB are generally not noticeable.

#### Public Improvements or Program Mitigation Measures Included in the Plan

The *Downtown Plan* calls for a reduction in the use of single occupant vehicles by means of Transportation Systems Management and the implementation of Level of Service D standard at Downtown intersections. If this were to result in a net decrease in the number of vehicles, operational traffic noise could decrease.

<sup>54</sup> U.S. Army Construction Engineering Research Laboratory, *Construction Site Noise Specification and Control, Report N-36*, 1978.

<sup>55</sup> See Footnote 52.



#### SENSITIVE RECEPTOR

#### NUMBER LOCATIONS

- 1 RESIDENTIAL NEIGHBORHOOD
- 2 ADMINISTRATION BUILDING, UCB
- 3 BEGINNING OF RESIDENTIAL NEIGHBORHOOD
- 4 & 5 RESIDENCE ABOVE COMMERCIAL
- 6 STARK RESIDENTIAL HOTEL
- 7 SHATTUCK RESIDENTIAL HOTEL
- 8 BERKELEY CITY LIBRARY
- 9 & 10 ARMSTRONG COLLEGE AND  
DICKENSON WARREN BUSINESS COLLEGE
- 11 & 12 VISTA COLLEGE
- 13 MLK JR. CIVIC CENTER BUILDING
- 14 BERKELEY HIGH SCHOOL
- 15 AMERICAN LANGUAGE ACADEMY

#### ESTIMATED NOISE LEVELS IN dB AT EACH SENSITIVE RECEPTOR

68	EXISTING CONDITION
69	NO ACTION ALTERNATIVE
69	BASE ALTERNATIVE
69	MAXIMUM BONUS ALTERNATIVE
68	LOW INTENSITY ALTERNATIVE



**Figure 38**  
**Estimated Peak Hour Noise Level  
at Various Sensitive Receptors**



### **Additional Mitigation Measures Recommended by this EIR**

#### **Remaining Impact 1: Construction and Traffic Noise**

**Mitigation Measures:** Various noise abatement measures such as design changes, purchasing of additional right-of-way, landscaping, acoustical insulation of buildings and construction of noise barriers could be considered for reducing noise levels at impacted receptors. The following measures are general noise abatement recommendations that could be implemented in specific cases as required:

- ☐ Construction equipment should be kept as far as possible from sensitive receptors.
- ☐ Acoustical shielding (temporary walls and noise barriers) should be provided around high noise producing equipment.
- ☐ Construction equipment should be monitored and inspected at periodic intervals to insure that the equipment is properly maintained and equipped with manufacturer's standard noise abatement devices, such as mufflers and engine covers.
- ☐ Effective acoustical mitigation measures, should be incorporated into individual projects, such as walls with high sound transmission loss, double glazed windows and acoustic doors, for new buildings planned to be constructed in areas with high ambient noise levels.
- ☐ Non-noise sensitive areas, such as parking should be located nearest to noise sources.
- ☐ Noise sensitive rooms should be located away from noise sources.
- ☐ Windows that are oriented towards the noise source should be of minimal size.
- ☐ Traffic lights should be synchronized to improve vehicular flow and reduce unnecessary stop-and-go traffic.
- ☐ Acoustical noise reports should be submitted with applications for building permits, for sites having a CNEL greater than 60 dB.
- ☐ Detailed acoustical mitigation measures for each development should be evaluated when detailed plans are prepared.

## HAZARDOUS WASTE/TOXIC MATERIALS

### Introduction

The purpose of this section is to identify past land uses or existing conditions in the project area related to the generation, use, storage or disposal of toxic materials. The particular sites which have known environmental contamination are evaluated and their impacts on development of the *Downtown Plan* assessed.

The study area contains a number of commercial enterprises which are commonly associated with soil and groundwater contamination. Because of recent heightened awareness of toxic materials and their potential for adverse public health impacts, a number of laws and regulations have been enacted on the federal, state, and local levels which require evaluation of the possibility that past land uses may affect the current health and safety of citizens. These laws and regulations require the exercise of due diligence in evaluating properties for toxic material contamination. Regulatory agencies have authority to require characterization of site-specific contamination as well as clean-up of those contaminants so that a site does not pose a threat to the public health and the environment.

### Setting

The principal potential contamination to the Downtown area identified in the *Berkeley Downtown Plan* comes from three sources:

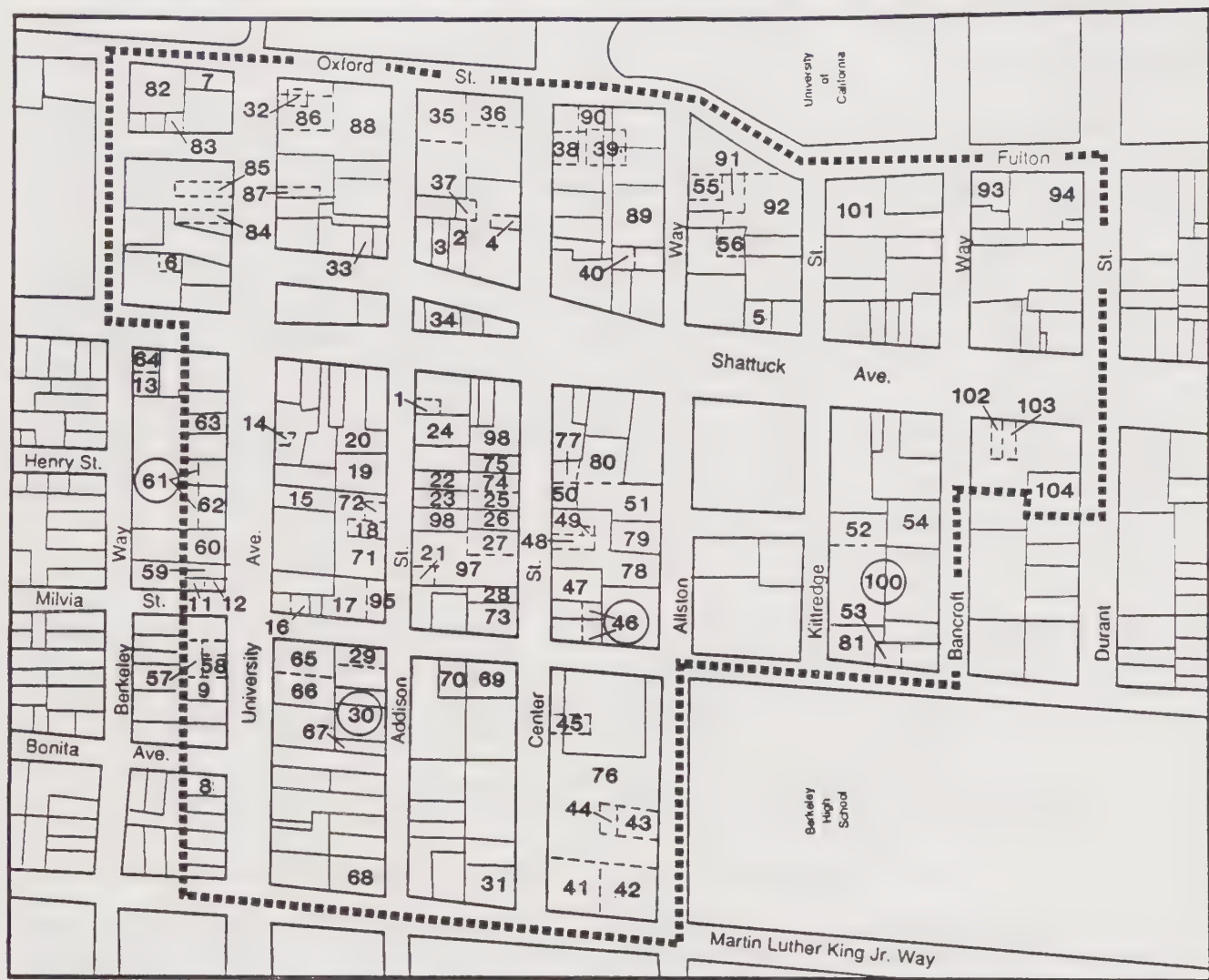
- ☐ Chemical contamination from such businesses as dry cleaning establishments;
- ☐ Gasoline and waste oil contamination from automobile repair and service facilities whose underground storage tanks (UST) may have leaked; and
- ☐ Fuel oil contamination from underground heating oil storage tanks.

Most fuel oil tanks (which have not been used for 30 years) were installed and some may have been abandoned prior to the promulgation of local regulations which require documentation of installation and abandonment. As a result somewhere between 20 to 30 underground fuel oil tanks with unknown locations probably exist within the Downtown area.<sup>56</sup>

Sanborn Fire Insurance Maps<sup>57</sup> from 1890 to 1950 were examined to determine past uses in the study area. Figure 39 and accompanying Table 37 show those businesses which may have generated, used, stored or disposed of hazardous materials. Automobile sales and services form the largest category of past uses which may have involved hazardous materials. Also, many more gasoline stations were located in the Downtown area during those years than currently. Other businesses in the study area which were involved with hazardous materials include: paint stores, dry cleaning establishments, book binding and printing establishments.

<sup>56</sup> Johnson, Britt, City of Berkeley, Department of Health and Human Services, personal communication, June 30, 1988.

<sup>57</sup> Sanborn Map Company, Insurance Maps of Berkeley, California, V.1, 1890, 1894, 1928, 1950, 1958; V.2, 1929, 1950.



- 96 LOCATION OF FORMER USE WITHIN EXISTING PARCEL  
90 LOCATION OF FORMER USE ENCOMPASSING MORE THAN ONE EXISTING PARCEL



**Figure 39**  
**Location of Parcels with a**  
**History of Hazardous Waste Use**



Table 37

List of Parcels On Which Hazardous Materials Were Used  
(by year of Sanborn Map)

1890

1 Laundry

1894

2 Paints  
3 Paints  
4 Laundry  
5 Wallpaper and paints

1928

6	Dyeing and cleaning	33	Paints
7	Oils and gas	34	So. Pacific Railroad Station
8	Auto painting and body shop	35	Auto sales and service
9	Feed and fuel	36	Printing
10	Auto electric	37	Printing
11	Tire shop	38	Printing
12	Auto sales	39	Photo studio
13	Battery shop - auto repair	40	Cleaning and dyeing
14	Hat cleaning	41	Auto repair
15	Paints	42	Gasoline and oil
16	Auto repair	43	Auto washing
17	Auto storage	44	Paints
18	Garage - repair shop	45	Battery shop
19	Printing	46	Auto repair
01	Hardware and paints	47	Garage
21	Laundry	48	Printing
22	Laundry	49	Printing and binding
23	Garage	50	Battery service
24	Garage	51	Garage
25	Printing	52	Garage, repairing
26	Auto repair	53	Auto sales
27	Auto repair	54	Oil
28	Painting	55	Laundry
29	Cleaning and dyeing	56	Auto sales
30	Auto repair and painting	102	Paints and wallpaper
31	Paints and vulcanizing	103	Paints
32	Gas station		

1950

10	Auto parts & sales	80	Auto repair & battery shop
57	Auto repairs	52	(Hazardous material use gone)
9	(Hazardous material use gone)	53	(Hazardous material use gone)
58	Used cars	54	(Hazardous material use gone)
11 & 12	(Hazardous material use gone)	81	Gas station
59	Used cars	82	Garage & auto repair

Table 37 (Continued)

List of Parcels On Which Hazardous Materials Were Used  
(by year of Sanborn Map)

1950 (cont.)

60	Paints & tires	83	Auto service
61	Auto repair	84	Paints
62	Parking	85	Paints & wallpaper
63	Paints	86	Used cars
64	Auto & tire service	87	Paints
65	Gas station	33	(Hazardous material use gone)
66	Tire storage & auto service	88	Auto sales & service
67	Machine shop & auto repair	35	(Hazardous material use gone)
68	Tire sales & service	37	Paper warehouse
69	Gas station	02	(Hazardous material use gone)
70	Gas station & auto washing	03	(Hazardous material use gone)
14	(Hazardous material use gone)	34	(Hazardous material use gone)
16	Paints & oil	38	(Hazardous material use gone)
17	Auto body paints & repair	39	(Hazardous material use gone)
71	Auto parts & machine shop	40	(Hazardous material use gone)
72	Auto sales & service	89	Printing office
18	Garage	90	Parking
22	Part of adjacent garage	55	(Hazardous material use gone)
73	Felt specialties	56	(Hazardous material use gone)
28	Book binding & printing	05	(Hazardous material use gone)
74	Printing	91	Parking
75	Paints	92	Gas station
76	(Block is now a park)	93	Gas station
77	Printing & repair shop	94	Gas station
47	Electrical & regrigeration repair	104	Auto service
78	Parking	102	(Hazardous material use gone)
79	Parking	103	(Hazardous material use gone)

1958

59	(Hazardous material use gone)	27	(Hazardous material use gone)
61	(Hazardous material use gone)	97	Garage
62	(Hazardous material use gone)	98	Garage
68	(Hazardous material use gone)	23	Garage
29	(Hazardous material use gone)	26	Garage
70	(Hazardous material use gone)	98	X-ray lab on 7th Floor
31	(Hazardous material use gone)	77	(Hazardous material use gone)
15	(Hazardous material use gone)	50	(Hazardous material use gone)
95	Auto top shop	99	Printing
18	Auto service	51	(Hazardous material use gone)
72	Auto body	100	Garage
96	Boat sales	7	(Hazardous material use gone)
19	(Hazardous material use gone)	88	(Hazardous material use gone)
20	(Hazardous material use gone)	92	(Hazardous material use gone)
24	(Hazardous material use gone)	101	Gas station
04	(Hazardous material use gone)	93	(Hazardous material use gone)

Source: Engineering-Science, Inc., Based on Sanborn Maps for years noted.  
See textual footnote 57.

All of the above types of businesses use various types of solvents, principally as cleaning agents. Automobile businesses also used petroleum hydrocarbon products. A past use of a hazardous material at any specific location does not necessarily indicate contamination exists, but because past attitudes towards the handling and disposal of hazardous materials were formed when less information was available about the effects of contamination and the industries less regulated, the probability of some environmental contamination is much higher on properties with these historic uses.

Files were examined, and personnel were interviewed at the California Department of Health Services (DHS), the San Francisco Bay Regional Water Quality Control Board (RWQCB), the City of Berkeley Department of Health (BHD), and the City of Berkeley Fire Department, to determine areas of known current contamination within the study area. This investigation found eight contamination sites. Figure 40, and accompanying Table 38 show the locations and nature of the sites currently on file with these regulatory agencies.

The main concern with contamination due to leaking underground tanks is migration of the contaminants in the soil into the groundwater. Of those cases currently on file with the regulatory agencies on which the site investigations have been completed, none of those investigations disclosed a contamination of groundwater above action levels.<sup>58</sup> For several of the listed sites, site investigations (including evaluations of groundwater) have not yet completed. However, according to Britt Johnson of BHD,<sup>59</sup> even in cases in which groundwater contamination is found, contamination plumes would be expected to move very slowly due to the nature of the soils.

A Texaco gas station was in operation from 1949 until 1983 at the corner of Hearst and Oxford. Although this is located outside of the *Berkeley Downtown Plan* area, the extent of subsurface contamination from its underground storage tanks, and the potential for contaminated groundwater to underflow the study area, make it important. Six suspected incidents of product loss occurred from September 1974 through March 1983 from leaking underground storage tanks and pipelines. Eleven groundwater monitoring wells, and at least five soil borings, have been used to determine the extent of contamination. Onsite remediation is planned using carbon filtration of the groundwater. Although contamination at this site is serious, site evaluations show that action limits of contamination do not extend downgradient across the Hearst/Oxford intersection, a half block away from the study area.<sup>60</sup>

Five sites within the study area are currently registered as having underground storage tanks on location. Figure 41 shows these sites and the size and type of tanks. Of the five listed, only one, the Firestone site, has any identified contamination that is pending investigation.

All twenty-four parcels listed in the *Downtown Plan* as having additional development potential are located on or adjacent to a site with historical hazardous material use. In addition, seven of these parcels are located on or adjacent to identified contamination sites on file with the regulatory agencies, or sites of registered underground storage tanks. Figure 42 shows the location of these parcels.

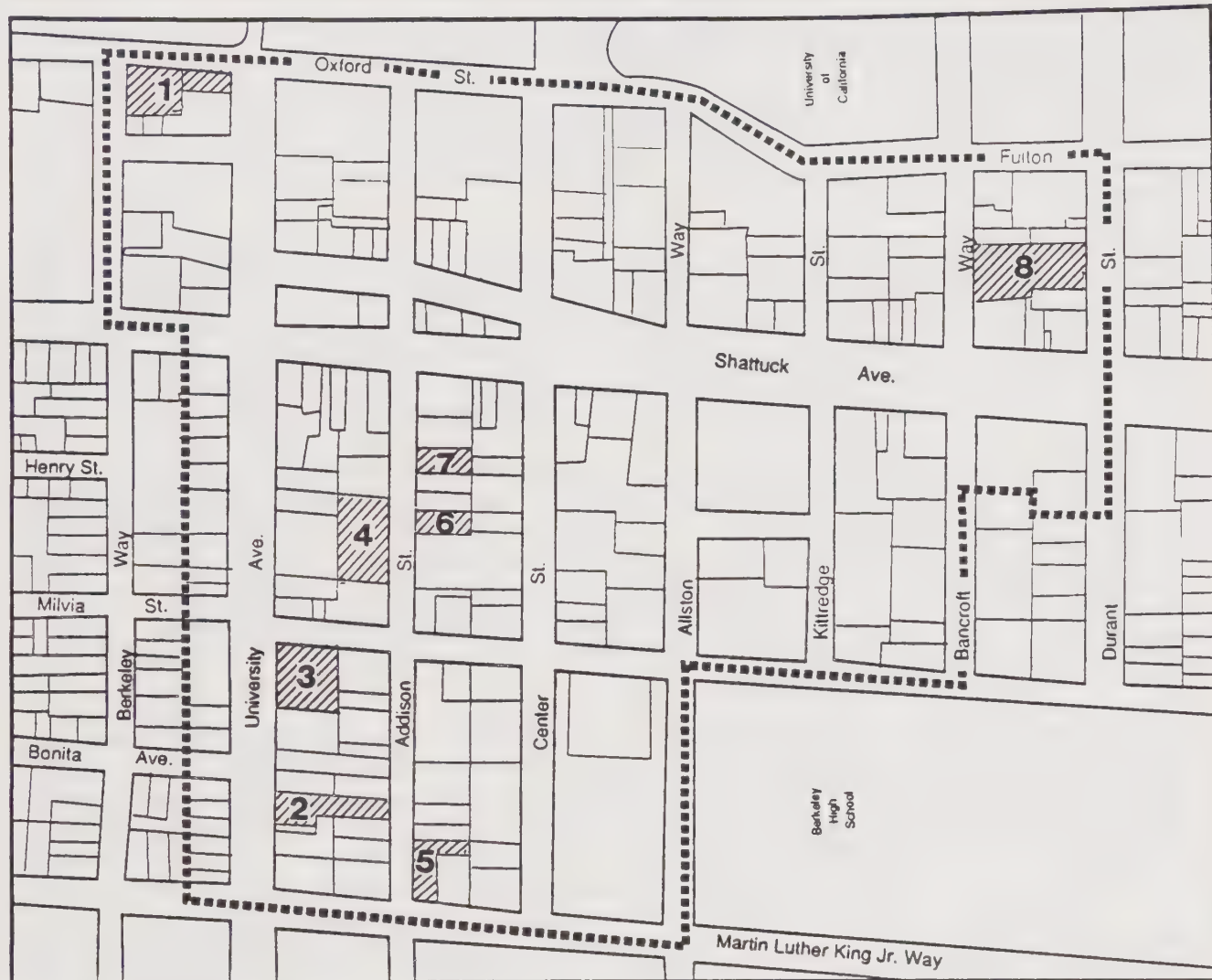
---

<sup>58</sup> The term "action level" represents the point at which the measured contamination requires that steps be taken to clean up the site.

<sup>59</sup> See Footnote 56.

<sup>60</sup> Berkeley Health Department, Files of Downtown area examined June 30, 1988; San Francisco Bay Regional Water Quality Control Board, File of Downtown area examined June 29, 1988; Berkeley Fire Department, files of Downtown area examined July 7, 1988.





- |                                       |  |
|---------------------------------------|--|
| ① STATE OF CALIFORNIA                 | ⑤ CALIFORNIA SCHOOL OF PROFESSIONAL PSYCHOLOGY |
| ② DON AND REINHARD FOREIGN CAR CORNER | ⑥ AUTOMOTIVE UNLIMITED                         |
| ③ FIRESTONE                           | ⑦ ADDISON ST. PROPERTY                         |
| ④ BERKELEY GLASS                      | ⑧ PACIFIC BELL                                 |



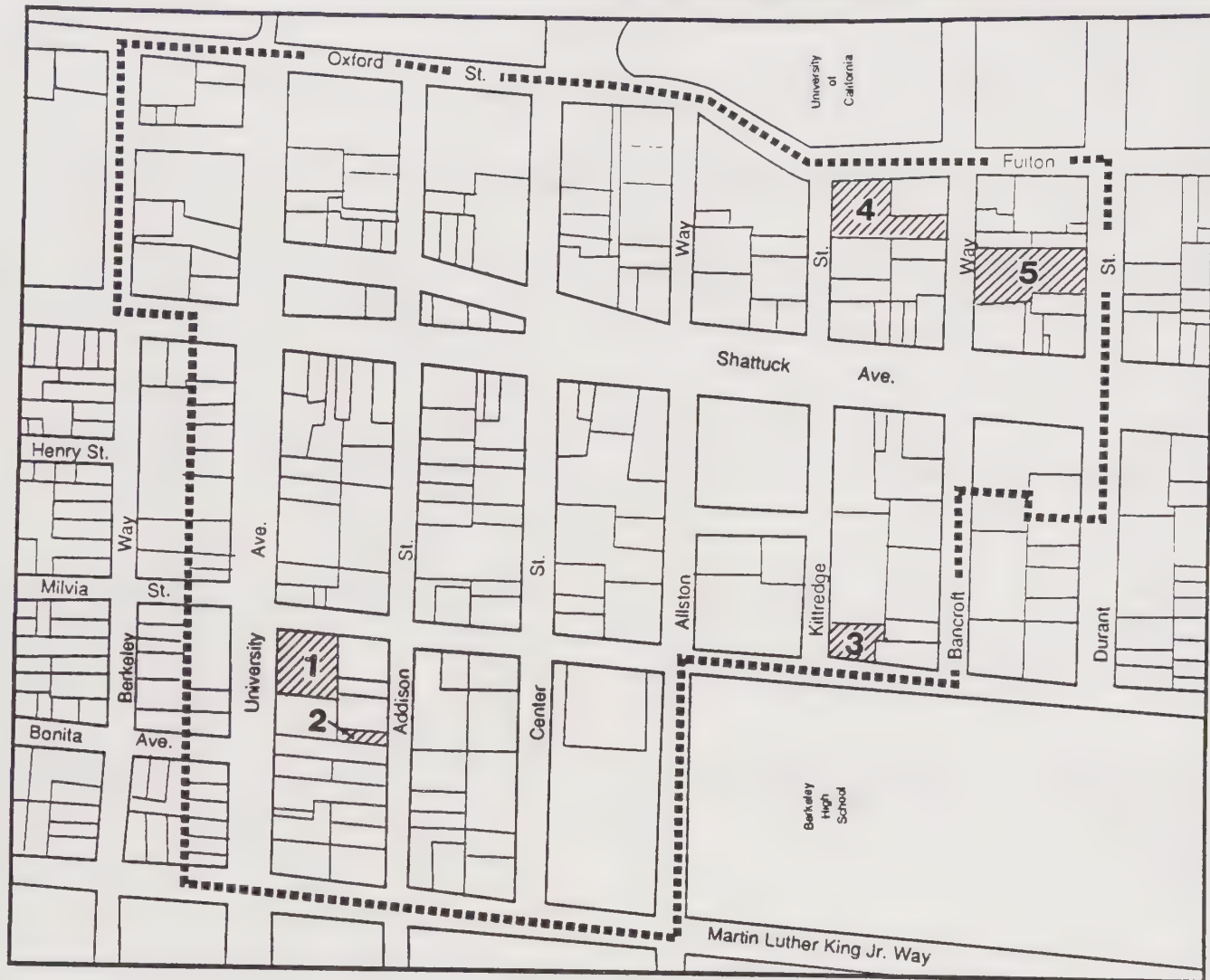
**Figure 40**  
**Location of Contamination Sites**

Table 38

## Current Contamination Sites within Berkeley Downtown Plan Area

<u>Site</u>	<u>Cause of Contamination</u>	<u>Date Discovered</u>	<u>Groundwater Involvement</u>	<u>Status of Remediation</u>
State of California 1900 & 1952 Oxford	Leaking underground storage tanks containing gasoline, diesel, and waste oil.	7/88	Investigation pending	Investigation pending
Firestone 1974 University Ave.	Leaking underground waste oil tank.	8/87	Investigation pending	Investigation pending
Berkeley Glass 2011 Addison St.	Leaking underground fuel tank.	7/87	No	Contaminated soils removed were action level. Case closed.
California School of Professional Psychology 1900 Addison St.	Leaking underground diesel heating	6/87	No	Contaminated soils removed. Case closed.
Automotive Unlimited 2020 Addison St.	Leaking gasoline and waste oil tanks.	8/87	Below action levels	Contaminated soils removed and two groundwater monitoring were installed. No further work recommended.
Addison Street Property 2040 Addison St.	Leaking underground fuel tank.	8/86	Possibly	Contaminated soils have been removed, but groundwater investigation still pending.
Pacific Bell 2115 Bancroft Way	Leaking underground diesel tank.	12/85	No	Contaminated soils removed. Case closed.

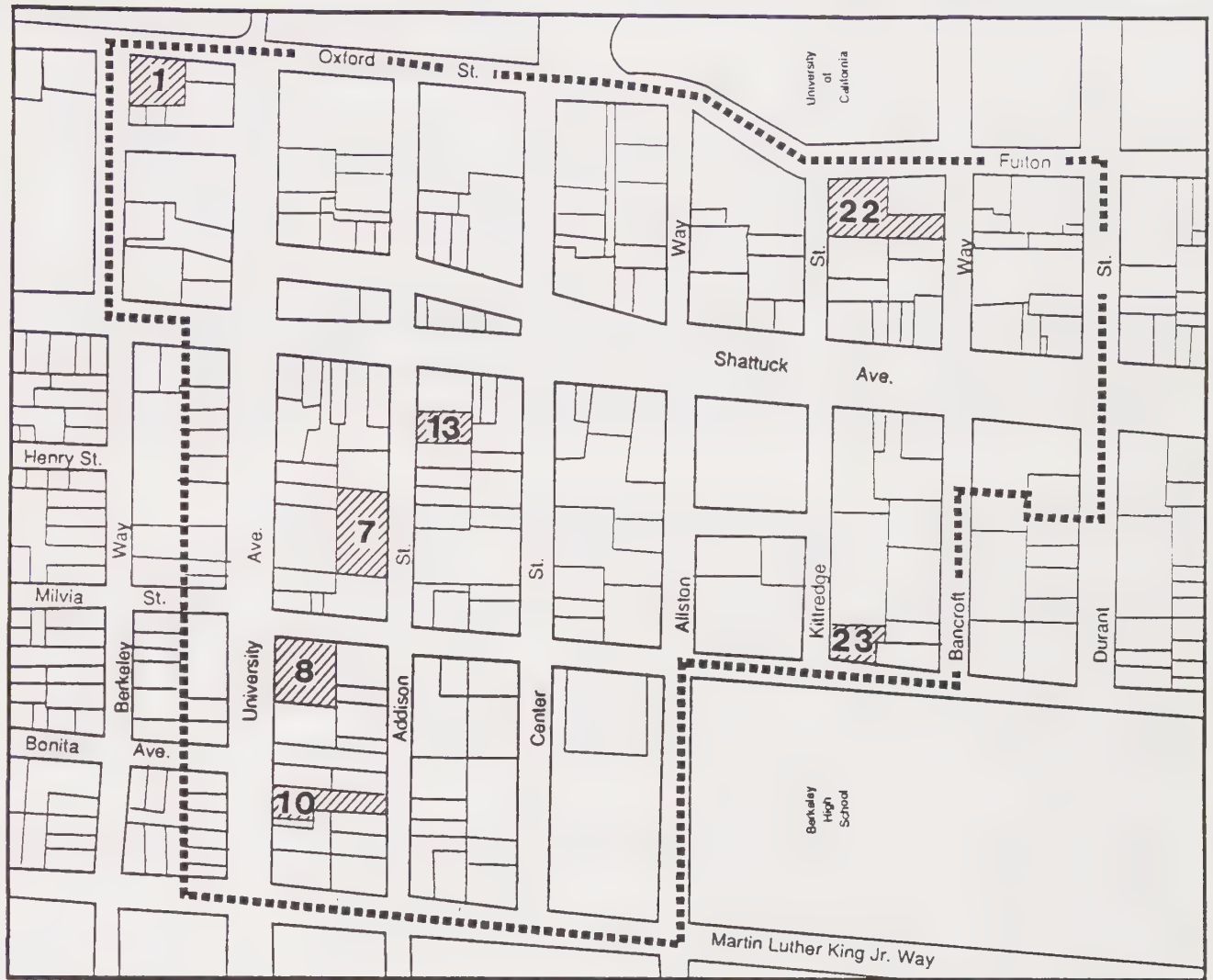
Source: Engineering-Science, Inc., 1988.



**Figure 41**  
**Location of Current**  
**Underground Storage Tank Users**







- |             |             |
|-------------|-------------|
| ① 2045-2    | ⑬ 2035-25   |
| ⑦ 2025-9    | ②② 2029-2-4 |
| ⑧ 2024      | ②③ 2028-13  |
| ⑩ 2024-10-2 |             |



**Figure 42**  
**Location of Parcels with Additional**  
**Development Potential on or**  
**Adjacent to Contamination Sites or**  
**Underground Storage Tank Sites**

### **Policies and Programs with Implications for Hazardous Waste/Toxic Materials**

Nothing in the proposed *Plan* would lead to increased risks due to hazardous waste or toxic materials as long as existing City, regional and State regulations are followed and the mitigation measures recommended below are fully implemented.

### **Impacts Due to New Development Allowable Under the Plan**

All impacts are common to all four alternatives, since the alternatives only vary as to size of development allowed and the regulations addressing potential toxic hazards apply equally to each of the allowed land uses. The possibility exists of encountering contaminated groundwater, soils and as yet unidentified underground storage tanks during construction period excavation especially in those parcels in which contamination is known or suspected to exist.

### **Public Improvements or Program Mitigation Measures Included in the Plan**

A Systematic Approach To Identify Underground Tanks and Possible Contamination. Five sites within the study area are currently registered as users of underground storage tanks. However, other unidentified tanks probably exist. Some of these as yet undiscovered tanks may have some associated contamination. This EIR provides an indication of past hazardous material use within the study area, but a much more in-depth study would be needed to actually locate abandoned storage tanks. Such a study is proposed in the *Berkeley Downtown Plan* (p. 44). As well as locating underground storage tanks, this proposed study could determine which of these sites could have a contamination problem.

Encourage Retail Businesses and Residential Properties to Replace Auto Repair Shops, Large Printing Facilities, and Other Industrial-oriented Businesses. An examination of past uses indicates that such a shift is already occurring. Many more automobile-related businesses existed within the Downtown area earlier in the century than now exist. The *Berkeley Downtown Plan* (p. 108) mentions several policies to encourage such a shift, including more restrictive zoning, tax benefits and density bonuses.

### **Additional Mitigation Measures Recommended by this EIR**

The following mitigation measures address the three impacts identified above (groundwater, soils and storage tanks). [◉]

Prior to commencement of any construction project a detailed study should investigate specific historic uses of the site to determine if site contamination exists. This is especially important but not restricted to those parcels shown in Figure 42 in which known past contamination exists or a known underground storage tank exists. This pre-construction study should determine if and where previously undetected underground tanks may exist. This study should be more detailed and more site-specific than that recommended in the *Downtown Plan*.

A city inspector should visit any development requiring excavation to determine if any visible signs of soil or groundwater contamination have been uncovered. If contamination is discovered, project sponsors should be required to insure that contaminated materials are handled and disposed of properly. In the event of severe contamination, a hazardous assessment report (including sampling, analysis and recommendation of remedial measures) should be required.

## GEOLOGY, SOILS AND SEISMICITY

### Setting

The Downtown study area is located on a slight downward slope (approximately two percent) to the west/southwest. Elevation in the study area varies from about 200 feet above sea level (USGS) to 140 feet above sea level. The Downtown area is located within a mile of the Berkeley Hills to the east.

The project site is underlain by relatively young sediments that have originated from the Berkeley Hills.<sup>61</sup> Material from the hills have been carried down toward the San Francisco Bay by local streams. The sediments are part of the Temescal Formation. This formation typically consists of silt, clay, sand and gravel that are either mixed together or appear separate as interfingering lenses. Figure 43 shows surface variations in the overlying recent sediments.

Underlying the more recent unconsolidated sediments is the much older bedrock of the Franciscan Formation. This bedrock also outcrops in the hills to the east, and provides the source of sediments for the more recent overlying sediments.<sup>62</sup> Foundation studies within the study area indicate that depth to bedrock is within 30 feet at the northeastern portion of the area.<sup>63</sup> Depth to bedrock deepens to the west, and in most locations within the study area is probably deeper than 50 feet.

Faulting has played a major role in the tectonic development of coastal California and the resulting regional topography, with the San Andreas Fault being the main structural feature. Several active branches (or otherwise related faults) of the San Andreas, with similar right lateral movement cross through the region (Figure 44). One such active branch, the Hayward Fault, runs parallel to the San Andreas along the western side of the Berkeley-Oakland hills and passes within three quarters of a mile of the study area.<sup>64</sup>

Many other active faults are located within the San Francisco Bay region along which earthquakes are expected to occur. Table 39 lists active faults in the region which could affect the study area, and also indicates length of faults, distance from the faults, maximum expected magnitude of earthquakes from the faults, and major earthquakes which have occurred in the past.

---

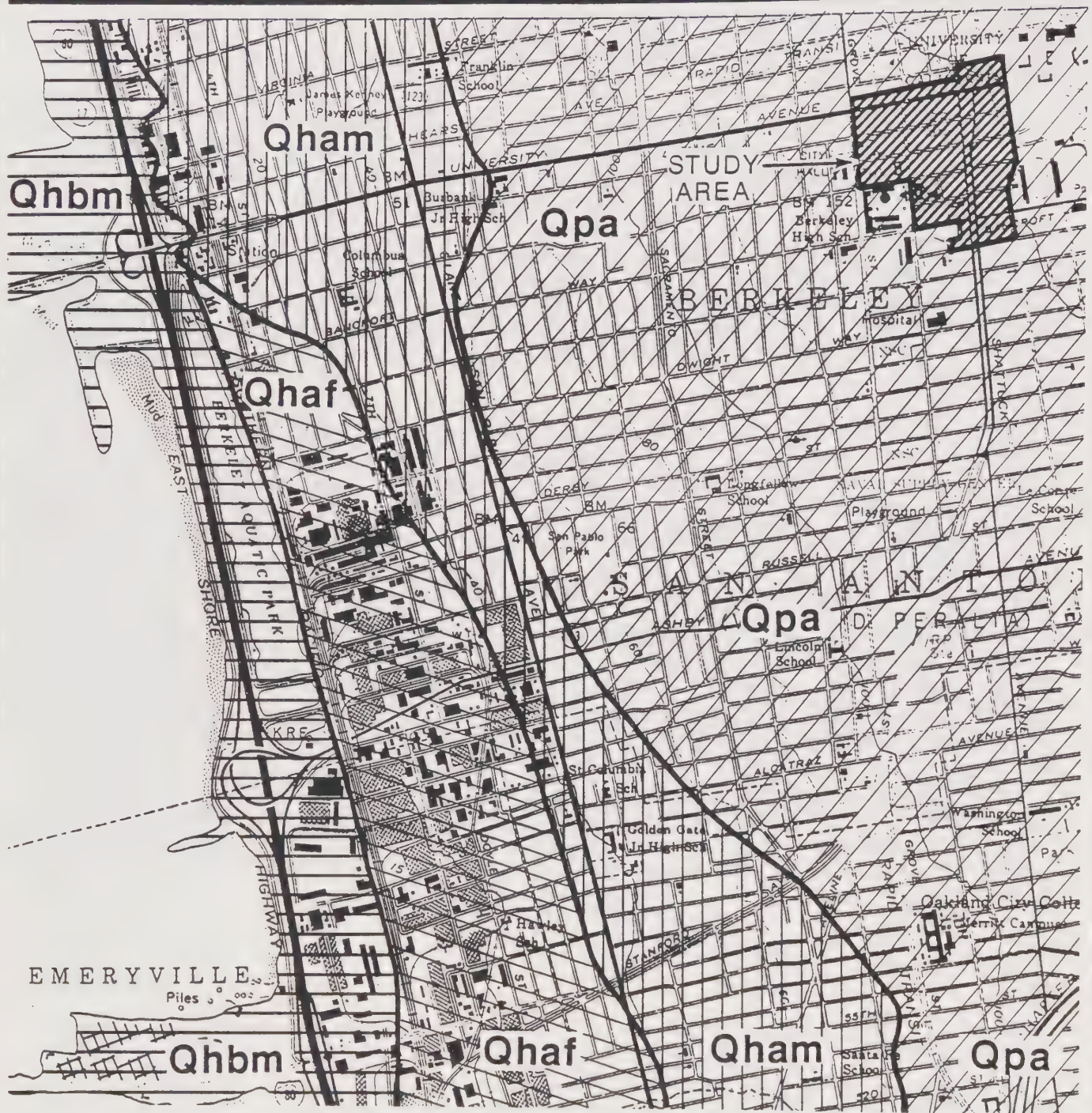
<sup>61</sup> Radbruch, D.H., 1957, *Areal and Engineering Geology of the Oakland West Quadrangle*, California, U.S. Geological Survey, Miscellaneous Geologic Investigations, Map I-239.

<sup>62</sup> Helley, E.J. and Lojoie, 1979, *Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning*, U.S. Geological Survey, Professional Paper No. 943.

<sup>63</sup> Planning and Community Development Department, Codes and Inspection Division, files were examined 1 July 1988.

<sup>64</sup> California Division of Mines and Geology, Fault Map of California, Geologic Data Series Map No. 1, Scale 1:750,000.



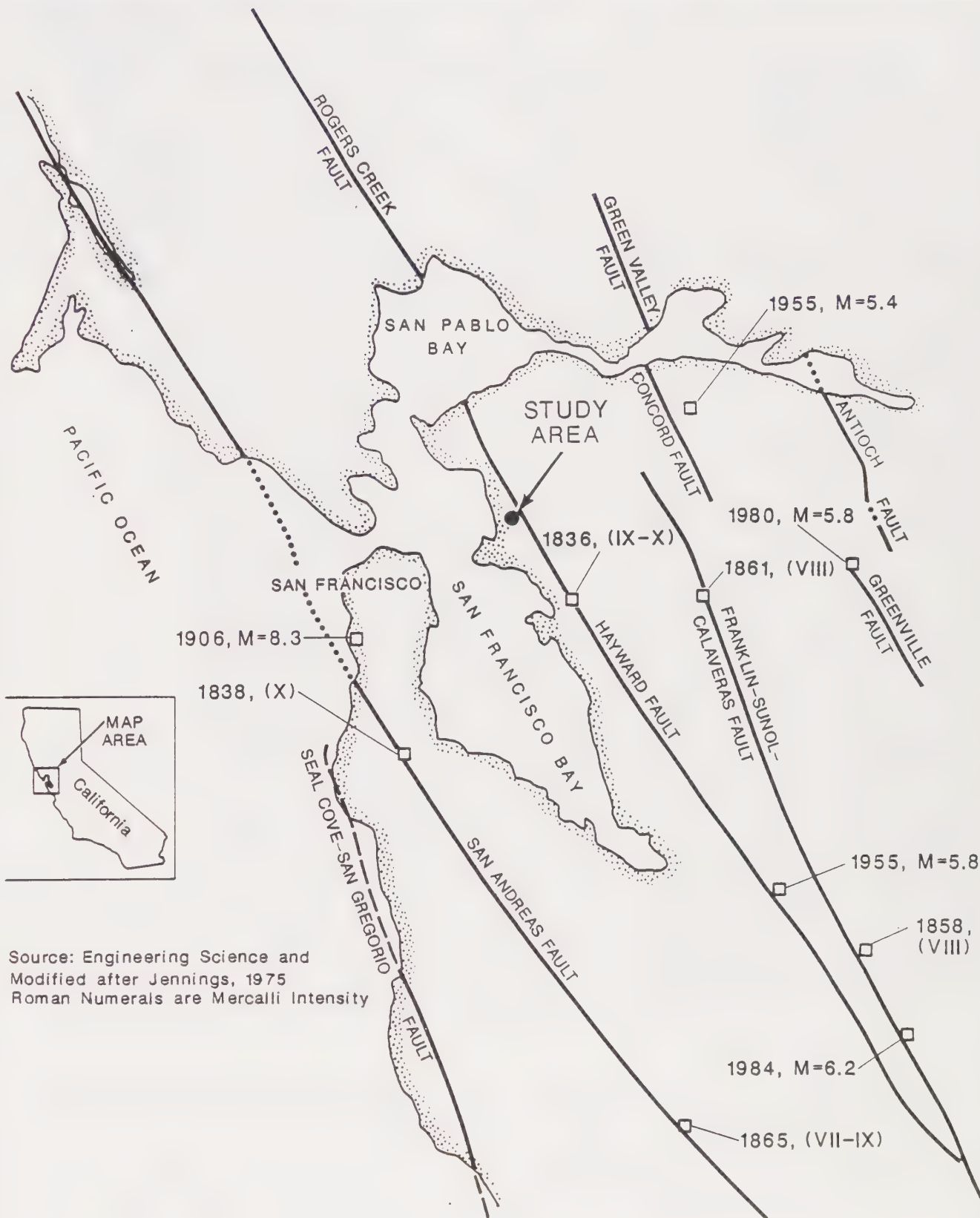


- Qhbm - ESTUARINE DEPOSITS BAY MUD
- Qhaf - FINE GRAINED ALLUVIUM
- Qham - MEDIUM GRAINED ALLUVIUM
- Qpa - LATE PLEISTOCENE ALLUVIUM

Source: Helley et. al., 1979; USGS 7.5 minute quad, Oakland West, 1980



**Figure 43**  
**Geologic Map of Surface**  
**Deposits in Project Vicinity**



Source: Engineering Science and  
Modified after Jennings, 1975  
Roman Numerals are Mercalli Intensity

**Figure 44**  
**Regional Map of Active Faults**  
**and Earthquake Epicenters**



Table 39

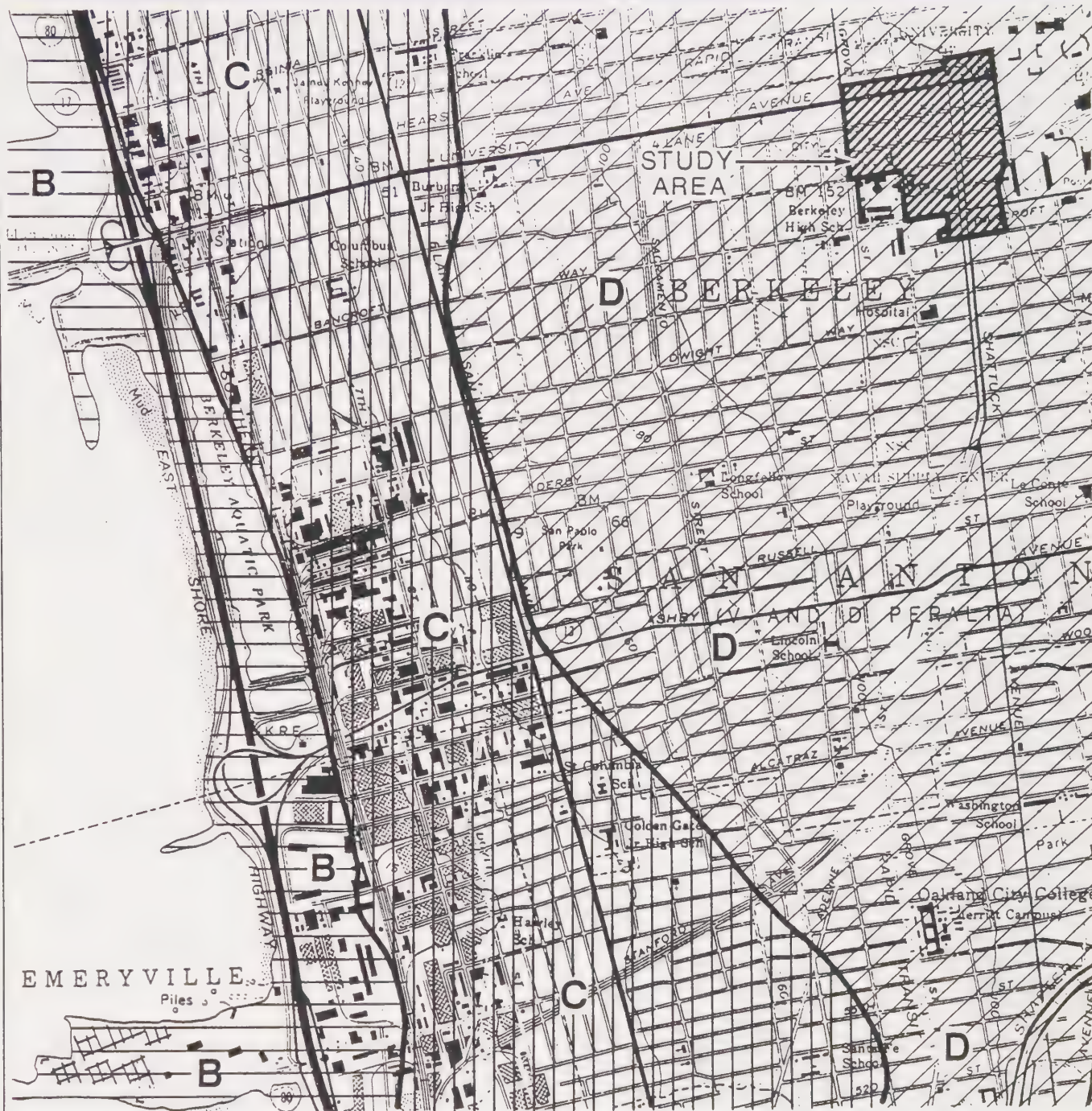
Seismicity of Active and Potentially Active Faults Most Likely  
To Affect the Berkeley Downtown Area

<u>Fault</u>	<u>Length (Miles)</u>	<u>Distance To Site (Miles)</u>	<u>Maximum Credible Event Richter Magnitude</u>	<u>Maximum Probable Earthquake Richter Magnitude</u>	<u>Historic Local Earthquakes</u>	
					<u>Date</u>	<u>Magnitude (or maximum intensity)<sup>a</sup></u>
Northern San Andreas	656	16	8.5	8.25	1838	7.0±
					1865	7.0
					1906	8.3
					1957	5.3
Seal Cove San Gregorio	110	27	7.8	7.5	1926	6.1
Calaveras	80	17	7.3	6.5	1861	7.0±
					1897	(VIII)
					1911	6.6
					1979	5.9
					1984	6.2
Hayward	60	0.75	7.3	6.5	1836	7.0±
					1868	7.0±
					1911	6.6
Green Valley	25	18	7.0	6.6	1955	5.4 Creep
Marsh Creek Greenville	20+	26	6.7	6.3	1980	5.8
Antioch	12	26	6.5	6.0	1872	IX to X
					1889	5.6 Creep
Midland Concord	50	14	7.3	7.0	1892	6.5±

<sup>a</sup> Intensities, listed as Roman numerals, are from the Modified Mercalli Scale of Earthquake Shock Intensities. Arabic numerals denote Richter magnitude.

Sources: Seismic Safety Element, Contra Costa County 1986; Beta Associates, Inc. 1985, Engineering-Science, Inc. 1986; Engeo, Inc. 1986; Contra Costa County 1986.





- |                  |                 |
|------------------|-----------------|
| A - VERY VIOLENT | C - VERY STRONG |
| B - VIOLENT      | D - STRONG      |

Source: ABAG, 1987 USGS 7.5 minute quad, Oakland West, 1980



**Figure 45**  
**Maximum Ground Shaking**  
**Intensity from Regional Active Faults**



Seismic response or intensity is the total reaction of a particular area to earthquake shaking. Three major factors determine the seismic response of any specific location: distance from the epicenter, magnitude of the earthquake, and the type of geologic material underlying the location.<sup>65</sup> In regions underlain by thick sequences of unconsolidated sedimentary deposits, certain frequencies of ground shaking may be amplified above bedrock levels due to resonance and impedance contrasts.<sup>66</sup> As a result, a location on bedrock close to an epicenter may experience less ground shaking than a location farther from the epicenter on less solid geologic material. Figure 45 is a map showing maximum ground shaking that can be expected from a major earthquake on any of the active faults of the region in the Downtown area. Those areas mapped as potentially experiencing violent ground shaking are underlain by artificial fill placed over soft bay muds. Farther east on more consolidated native alluvial materials, the intensity of ground shaking can be expected to be less. The maximum ground shaking that can be expected in the Downtown area as classified by the Association of Bay Area Governments is Category D - strong.

A secondary seismic hazard associated with strong earthquakes is liquefaction, a process in which granular sediments are altered from a solid to a liquefied state as a result of increased pore-water pressure caused by repeated cycles of dynamic loading.<sup>67</sup> Liquefaction by itself poses no particular hazard but it can present a problem to engineered structures when it leads to permanent ground deformation or to structural failure resulting from lateral spreading or loss of bearing capacity. The phenomenon of soil liquefaction requires the simultaneous occurrence of three conditions:

- ☐ The presence of loose to medium dense sands which are relatively clean (have a low silt and clay content).
- ☐ A saturated condition, with the water table within approximately 50 feet of the ground surface.
- ☐ Cyclic loading of greater than about 0.2 g and of relatively long duration.

It is unlikely that all of these conditions would occur within the study area.

Liquefaction susceptibility for the study area is classified by the Association of Bay Area Governments as low (Figure 46). It must be emphasized that these mapped categories are only generalizations of sediments, which are quite heterogeneous. As such, susceptibilities at any individual property in the Downtown will vary depending on the specific engineering characteristics of the underlying sediments.

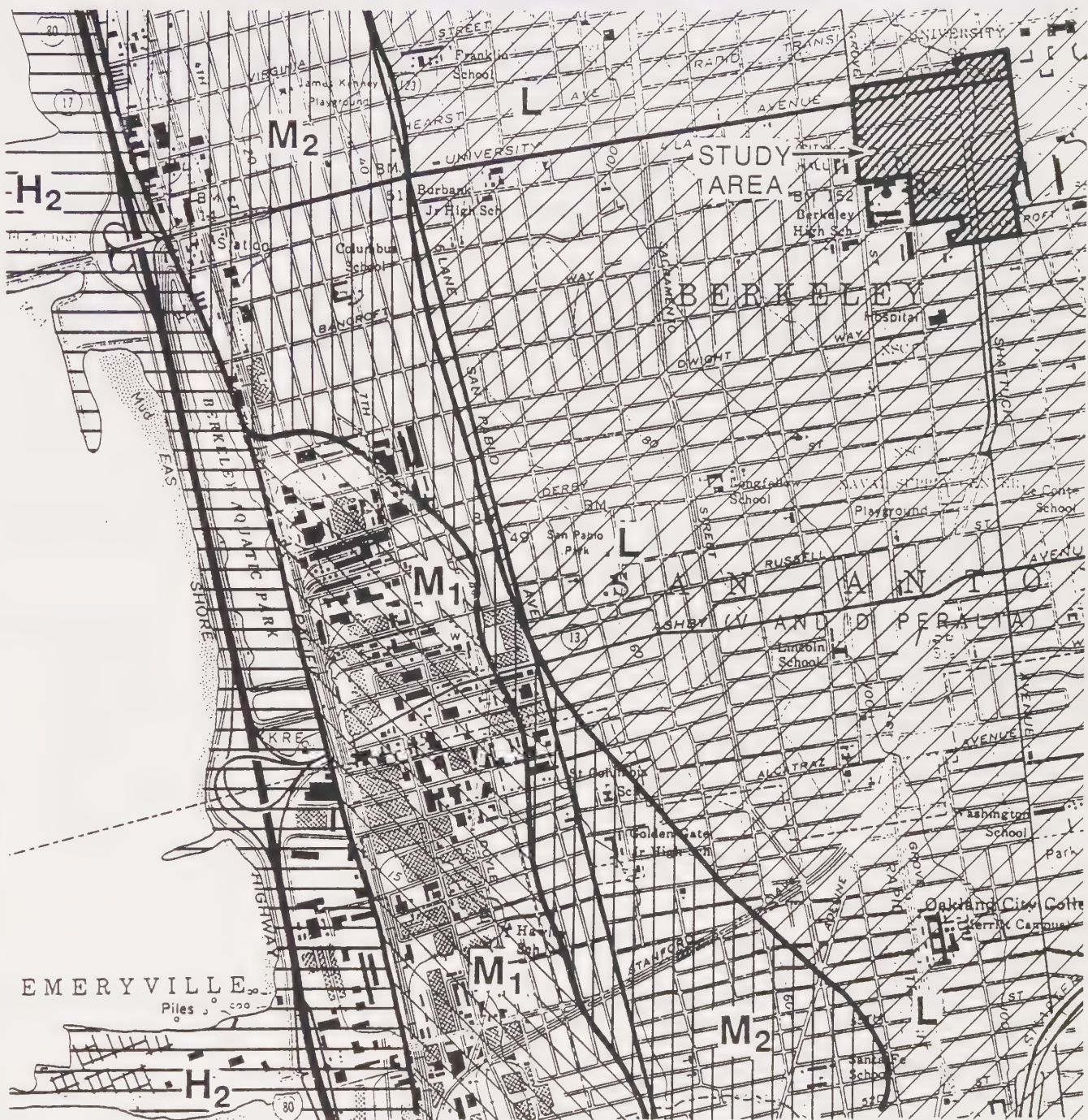
Under state law, potential seismic hazards are defined in terms of the age of activity of a given fault which generally correlates with its potential hazard. Holocene activity (<10,000 years old) is the criterion used to classify a fault as active. Historical activity, such as is evident in the San Andreas and Hayward faults, classifies them as active. Projects proposed for location within a zone of active faults, as regulated by the Alquist-Priolo Zone Act administered by the California Department of Mines and Geology, are required to have site specific seismic hazard surveys performed before any site development can occur. Downtown Berkeley is outside any Alquist-Priolo designated zones.

<sup>65</sup> Perkins, J., 1983, *A Guide to ABAG's Earthquake Mapping Capabilities*, Association of Bay Area Governments, Oakland, California.

<sup>66</sup> See footnote 62.

<sup>67</sup> See footnote 62.





**Figure 46**  
**Liquefaction Susceptibility**



## Policies and Programs with Implications for Geology, Soils and Seismicity

Retain the Older, Historically Valuable Building in an Around the Downtown, in Particular along Shattuck Avenue. The *Downtown Plan* includes a variety of policies that would encourage retaining historic buildings and adaptive re-use of older buildings. One of the suggestions in the *Plan* mentions utilizing the State Historic Building Code, which exempts designated historic buildings from the more stringent regulations of the City's building code. Although such a policy would encourage the reuse of older historic structures, it could increase the risks of exposure to seismic hazards for the occupants and the public outside these structures in the event of a large earthquake.

Buildings Along Shattuck Avenue Should be Faced with Natural Brick, Pressed Brick, Concrete, or Stucco, Stone (Marble, Granite), Tile, or Terra Cotta. Such facing, if improperly installed, could present a serious risk to pedestrians in the event of a large earthquake. It is critical that such work meet the requirements of the Uniform Building Code.

### Impacts Due to New Development Allowable Under the Plan

Impacts resulting from allowable physical development would apply equally to all alternatives.

Impacts Common to One or More Alternatives. Large amounts of soils from development excavations, if not properly stored, could be washed down city storm drains, increasing the sediment load, and decreasing the efficiency of the system.

The main hazard associated with earthquakes in the Downtown Berkeley area is damage to structures from ground shaking, although a slight risk of settlement in response to liquefaction<sup>68</sup> also exists.

### Public Improvements or Program Mitigation Measures Included in the Plan

The *Plan* calls for promoting earthquake reinforcing of older and historic buildings. The *Plan* mentions various means to accomplish this goal including:

- ☐ Locating and utilizing existing federal, state, regional and local funding programs;
- ☐ Encouraging the establishment of a fund for contributions and grants;
- ☐ Determining feasibility of a revenue bond program for structural rehabilitation at below market rate financing; and
- ☐ Studying possible tax incentives.

The *Plan* discusses developing an ordinance regulating seismic hazards identification and correction. This ordinance would include inventorying buildings within the Downtown and grouping them into categories that would identify those structures that are most at risk, such as unreinforced masonry. Such an inventory is currently under way through the City of Berkeley Planning and Community Development Department.<sup>69</sup> This inventory is scheduled to be completed in January 1990.

<sup>68</sup> Liquefaction is the behavior of certain types of soils during seismic events as though the soils had the characteristics of a liquid.

<sup>69</sup> Yould, T.L., 1982, *Liquefaction Hazards in the Eastern San Francisco Bay Area from Proceedings of Conference on Earthquake Hazards in the Eastern San Francisco Bay Area*, California Division of Mines and Geology, Special Publication, No. 62.

### **Additional Mitigation Measures Recommended by this EIR**

**Remaining Impact 1:** Potential Increase in Sedimentation During Excavation [⊙]

**Mitigation Measure:** Soils stockpiled during any excavation which occurs during the rainy season should be protected by berming and covering to prevent the soil from being washed into the city storm drains and increasing sedimentation.

**Remaining Impact 2:** Potential Structural Damage During an Earthquake [⊙]

**Mitigation Measure:** Proposed structures within new developments should be designed to withstand the effects of seismic ground shaking and settlement. This includes compliance with the seismic requirements of the most current Uniform Building Code and incorporation of engineering recommendations by a qualified geotechnical engineer into the final designs of and proposed development. All building foundations should be constructed on strong native soil areas approved by a geotechnical engineer. All proper engineering procedures should be undertaken during site and foundation preparation and construction to reduce the potential for structural damage during an earthquake.

**Remaining Impact 3:** Potential for Exemption of Historic Buildings From Seismic Requirements of the Uniform Building Code to Result in Injuries to Occupants and Pedestrians [⊙]

**Mitigation Measure:** As previously discussed, historic buildings within the Downtown area should be reinforced. All reinforcement should be in compliance with the seismic requirements of the most current Uniform Building Code. The State Historic Building Code, which exempts designated historic buildings from the more stringent regulations, should not be used.

## HYDROLOGY AND WATER QUALITY

### Introduction

The downtown area is highly urbanized, most of the study area being covered by buildings or streets which create a large surface area for runoff. Water quality and hydrology issues are runoff, flooding, sewer infiltration and leakage and the proposed opening up of Strawberry Creek through downtown. Contamination of groundwater by hazardous wastes is addressed under the *Hazardous Waste/Toxics* section.

### Existing Setting

None of the downtown area is within a flood hazard zone as defined on the Flood Insurance Rate Map published by the National Flood Insurance Program.<sup>70</sup> A narrow zone along Strawberry Creek on campus just across Oxford Street is within the 100 year flood zone, but a culvert approximately six feet high diverts the creek under downtown and is adequate to handle a 100 year flood. Berkeley's Flood Control Ordinance (No. 5849) went into effect on June 1988, replacing previous municipal code sections. Localized street flooding is controlled by a network of storm sewers which perform well when maintained properly. However, accumulated trash has in the past clogged drains and caused localized street flooding. Runoff from east-west streets flows generally toward the west; on north-south streets, toward the south.

With the possible exception of a few wells outside the downtown area, groundwater is not utilized in Berkeley. The groundwater level below downtown is seasonably variable, rising in the spring and dropping in the fall. No detailed data exist for the entire downtown area, but at a lot on Allston Avenue between Shattuck and Milvia (about the center of the area) the level is generally at about 20 feet below the surface.<sup>71</sup> The groundwater table rises during wet weather and infiltrates old, leaky sanitary sewers, occasionally causing them to overflow. During dry weather, it is likely that these sewers leak wastewater into the groundwater but the problem has not been severe and efforts are under way to correct this situation (see *Public Facilities and Services - Sanitary Sewers*).

As part of a 20-year program, seven adjacent communities including Berkeley have begun to repair or replace leaking sanitary sewers. The sewers are being re-lined or replaced, and in some cases a new sewer will be installed to handle increased volume. In the downtown area, a new relief sewer along Shattuck Avenue is proposed in the first five years of the program. The northern half of downtown is within the region where comprehensive rehabilitation is proposed during years 1-5. The southern half (south of Addison and Allston Streets) is scheduled for a long term management program.

The current and planned repair or replacement of old sanitary sewers which now pick up runoff water in wet weather may result in ponding of runoff water if existing storm sewers are inadequate to carry the volume that formerly infiltrated the old sanitary sewers. Hydrological modeling may be needed in some cases to identify such areas and target them for action to prevent flooding. This is especially true in areas like downtown where paved surfaces generate substantial runoff.

---

<sup>70</sup> U.S. Department of Housing and Urban Development, 1978, *Flood Insurance Rate Map*, City of Berkeley, Federal Insurance Administration. Available at Engineering Department, City of Berkeley.

<sup>71</sup> Lotter, Herb, 1988, Senior Civil Engineer, City of Berkeley Engineering Department, City of Berkeley.



The former and existing channels for Strawberry Creek are shown in Figure 47. The characteristics of the creek on campus, including water quality, are extensively described in the Strawberry Creek Management Plan<sup>72</sup>, which is hereby incorporated into this EIR by reference. Cooling water effluent from campus contributes half of the low flow volume, which averaged 0.89 cubic feet per second (cfs) above Oxford Street between 27 May and 19 August, 1987. This flow is equivalent to 400 gallons per minute. The creek exhibits a very flashy hydrologic regime (i.e., it is prone to rapid runoff during storms). During a storm event with a 25 year recurrence interval, more than 1,650 cfs could enter the creek, but much of this water would be held in a retention basin on campus.<sup>73</sup>

Low flow water quality is fairly good with high levels of dissolved oxygen and low levels of trace metals, total dissolved solids, suspended solids, turbidity, color, chloride and oil and grease. Elevated levels of nutrients and fecal coliform bacteria occur in the lower campus area. This contamination has been traced to several sources, including improperly connected sewers and leaking sewers at several locations on campus. Some of these problems have already been corrected, some pipes are being repaired, and other problems remain under investigation.

Other sources of contamination include over a dozen cooling towers which (when purged about once a week) discharge a high solids content and trace metals, which have been measured at some of the point sources on campus. All concentrations measured were below the Maximum Contaminant Levels set forth in the National Primary and Secondary Drinking Water Regulations. A few measurements of hexavalent chromium, zinc and copper exceeded the RWQCB surface water quality objectives but the water quality is satisfactory for maintenance of aquatic life and for drinking. Hot water discharges from the campus heating plant also introduce thermal pollution into the creek. The management plan recommends that blow down from the cooling towers and thermal discharge be routed to sanitary sewers.

During wet weather, water quality in Strawberry Creek deteriorates due to urban runoff. Significant increases in chemical oxygen demand (COD), suspended solids, turbidity, total nitrogen, phosphorus, total and fecal bacteria as well as trace metals were measured during a storm in October 1987.<sup>74</sup>

Sediment concentrations of trace metals were generally within expected, naturally-occurring ranges except for lead, zinc and mercury. The former two are common in urban runoff but investigation of the source of mercury contamination is recommended in the Management Plan.

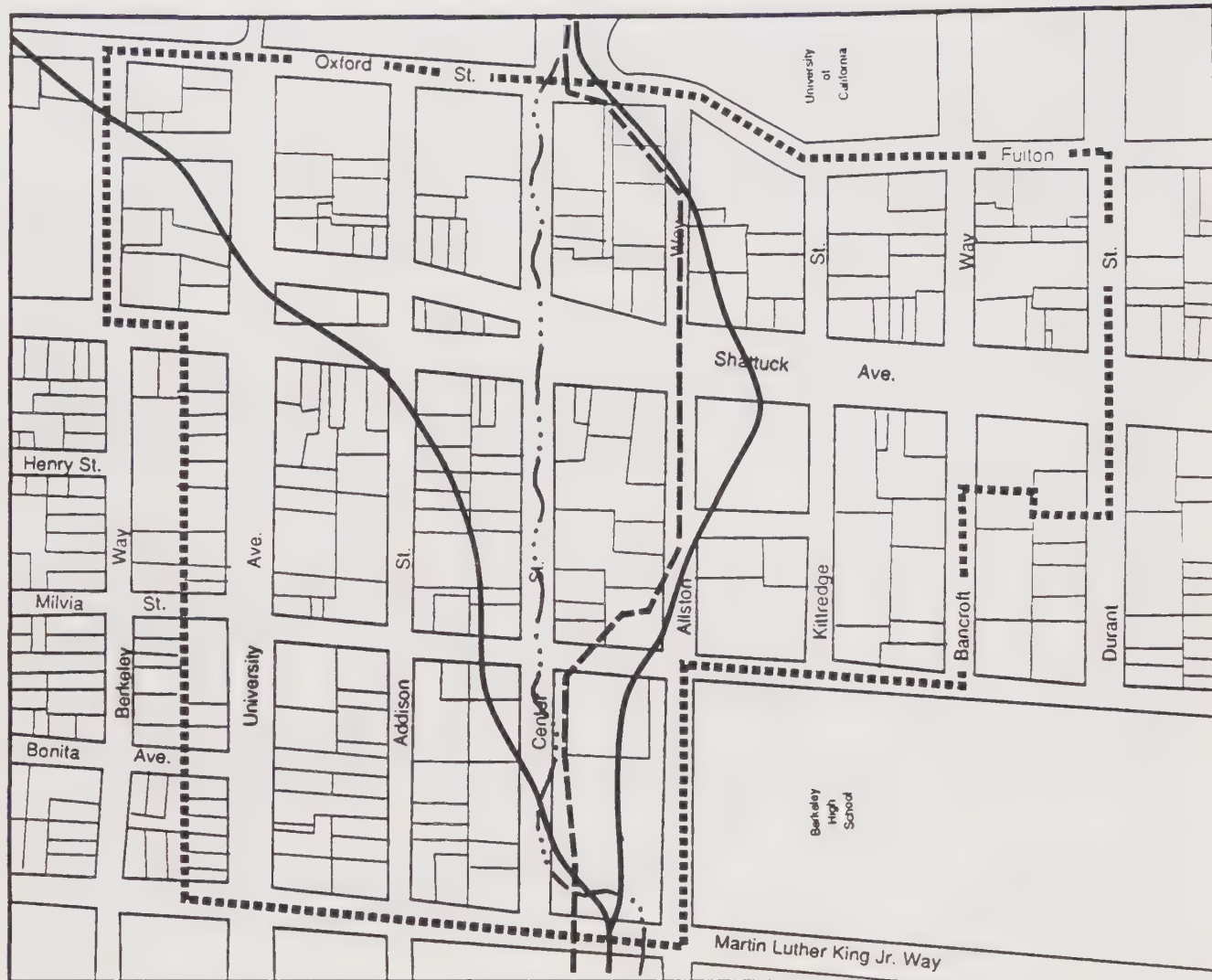
As late as 1930, Strawberry Creek supported migratory runs of steelhead. Today, fish do not exist in the creek even though bioassays indicate that south fork water quality is satisfactory for sensitive species such as the fathead minnow. Samples of invertebrates taken in 1987 just above Oxford Street indicate that the aquatic community is in a stressed condition. However, a cursory investigation at this location and below downtown at Strawberry Park revealed the presence of large crayfish, water striders, snails, dipteran (fly) larvae and possibly stonefly larvae. Recent elimination of sewage discharges to the creek may have improved water quality such that the aquatic community above downtown is no longer as stressed as it was when samples were taken in mid-1987. A rat was also observed along the banks above Oxford Street, and a slight sewage odor was detected at the mouth of the culvert.

---

<sup>72</sup> Charbonneau, R.B., 1988, *Strawberry Creek Management Plan*, Professional Report, Department of City and Regional Planning, U.C. Berkeley, Berkeley, California.

<sup>73</sup> Lennert and Associates, 1972, *Storm Drainage at the University of California*, Report prepared for the University of California at Berkeley Department of Facilities Management.

<sup>74</sup> See Footnote 3 above.



--- Existing Underground Culvert

— Original Creek Channels

- . - . - Proposed Above Ground Channel

Source: From sketch plan by Doug Wolfe,  
Berkeley Citizens for Creek Restoration



**Figure 47**  
**Location of Strawberry**  
**Creek Features**



The culvert which carries Strawberry Creek below downtown begins at an elevation of about 200 feet and drops to about 150 feet at the east side of City Hall. This 50 foot drop over approximately 2,500 feet represents a gradient of about two percent through the downtown area.

The culvert below downtown is generally 6-8 feet below the street level. Considering the 5-6 feet height of the culvert, the bottom of the structure is 11-14 feet below the street. A draft City of Berkeley Ordinance for the Preservation and Restoration of Natural Watercourses provides incentives to prohibit future culverting of creeks and to restore and reconstruct those that have been buried.

### **Policies and Programs Significantly Affecting Water Quality and Hydrology**

Policies and programs proposed in the *Berkeley Downtown Plan* which may affect water quality and hydrology can be grouped into two categories: those which would attract residents and visitors downtown and those related to Strawberry Creek.

Encourage Increased Use of Downtown for Cultural Events, Evening Activities, Retail Sales and Housing. The *Downtown Plan* includes a variety of policies and programs that, collectively, would increase use of the area by attracting more people, creating a 24-hour environment, and encouraging more pedestrian activities. This increased use may affect the amount of litter that accumulates in the storm drains and sewers, thus increasing the risk of flooding from clogged drains. The increased number of people and frequency of use would also create more wastewater, possibly requiring increased capacity within the sanitary sewer system (see *Public Facilities and Services*).

Prepare a Feasibility Study to Uncover Strawberry Creek. The potential effects of a feasibility study depend upon the outcome of the study. Should the study recommend uncovering the existing culvert or original stream bed (see Figure 47) that carries the creek below downtown, there could be adverse impacts to water quality and hydrology as described below:

- ☐ Potential flooding from storms that exceed the level utilized in planning (e.g. events greater than the 100 year flood);
- ☐ Limitation on design of the channel imposed by the existing material (concrete) and depth of the culvert (about 11-14 feet from ground level to culvert bottom);
- ☐ Health hazards from bacteria discharged on campus. In 1987, bacteria levels would, at times, have been hazardous for water contact; and
- ☐ Costs for trash and silt removal from the channel and responses to accidental spills in the creek.

Beneficial results of uncovering of the creek are set forth in the *Strawberry Creek Management Plan* (see footnote 40).

### **Impacts Due to New Development Allowable Under the Plan**

Impacts Common to One or More Alternatives. Additional parking facilities are unlikely to increase the volume of runoff. However, this potential effect depends upon the land use being replaced by the new parking facility. If the runoff coefficient of the former land use is the same as that of a parking facility (i.e. both were covered by similar roofs or pavement) there would be no increase in runoff. Almost the entire downtown area is currently occupied by structures that would have a similar runoff coefficient as a parking facility.



The site of the proposed 300+ space facility is currently used for parking. If the parking facility were built underground, wet weather construction may require dewatering to lower the groundwater level. The City Department of Engineering is not aware of any cases in which dewatering has resulted in adverse impacts.<sup>75</sup>

According to the City Flood Control Ordinance, relocation of Strawberry Creek would require notification of adjacent communities, the State Department of Water Resources and the Federal Insurance Administration. The flood-carrying capacity of the altered portion of the watercourse must be maintained. Certain restrictions also apply in floodways such that any increase in flood levels during the occurrence of the base flood discharge is prevented.

Impacts Specific to the No-Action Alternative. No consolidated parking lots would be built under this alternative. Hydrologic impacts would depend on the current maintenance of storm drains, and the ongoing repair and replacement of existing sanitary sewers which could possibly lead to a backup of storm water formerly infiltrating the old, leaky sanitary sewers. This possibility would not occur until after completion of the sewer program in several years. Continuation of current land uses and development policies is not expected to significantly impact the overall runoff coefficient of the downtown area.

Impacts Specific to the Downtown Plan Maximum Bonus Alternative. Under this alternative, nearly 800 parking spaces would be required and these spaces would be incorporated into the ground floors or basements of new buildings. Also, 834 residential units could be built, mostly in multi-story buildings. It is doubtful that runoff characteristics would substantially change from the existing situation because the entire surface area is likely to remain covered by materials with a high runoff coefficients (i.e., rooftops, asphalt, bricks or concrete). If underground construction occurred below about 20 feet (more or less, depending on the season) dewatering would be required during construction.

Impacts Specific to the Low Intensity Alternative. About 1,557 parking spaces would be required in the Downtown area, 783 of which would have to be provided below grade. Because the above ground spaces would most likely replace land uses with similar runoff coefficients, there would not be significant increases in runoff from the parking structures. the large number of below ground spaces could require dewatering at the construction site during the winter when groundwater levels rise.

#### Public Improvements or Program Mitigation Measures Included in the Plan

The *Downtown Plan* calls for the establishment of a street cleaning program, providing more trash receptacles and increasing litter collection efforts. This would mitigate the potential for increased clogging of storm drains by the litter generated by an increase in Downtown residential population and employment.

#### Additional Mitigation Measures Recommended by this EIR

Remaining Impact 1: Potential Adverse Effects of Opening  
Existing Strawberry Creek Culvert [◉]

Mitigation Measure: The mitigation measures listed below include analyses that would assist in determining the feasibility of uncovering Strawberry Creek.

<sup>75</sup> See footnote 71.

Many of the impacts from opening the existing culvert would be avoided if, as proposed by the Berkeley Citizens for Creek Restoration, a new channel through downtown were designed and the existing culvert retained to carry storm water flow (which is usually of degraded quality). The City should analyze potential new routes for the Creek. One route for a new channel proposed by a representative on the Citizens committee is depicted in Figure 47. Such a route would minimize cost by utilizing public land and allowing a design that would accomplish the following:

- Provide a safe environment by controlling the slope of creek banks. The new channel could be 2-3 feet deep instead of 11-14 feet.
- Promote a more aesthetic, functional channel by controlling the material used for the creek bed and banks (e.g. the use of vegetation, gabions and bioengineering materials instead of plain concrete). Such materials are discussed in the Strawberry Creek Management Plan.
- Eliminating contamination of the creek by non-point source runoff of existing leaks from sanitary or storm sewers. The new channel could be isolated from these potential sources of pollution.
- Control maintenance by utilizing the two percent slope gradient to create a self-cleaning stream with selected loci for sediment/trash, water ladders for aeration, detention basins, heavy use area protection, etc. Many of these features are described in more detail in the Strawberry Creek Management Plan.
- Provide additional flood control by using both the culvert and new channel to carry flood flows. This could also prevent flood water of degraded quality from flowing through the open channel downtown by routing it through the culvert except during severe floods.
- Establish a habitat where native minnows could be re-introduced to the creek and would thrive. This would be a first step in re-introducing migratory steelhead, which would be likely to return if the entire creek were brought back above ground.

The above listed mitigations would not eliminate bacterial contamination from campus, but the University is now working to correct this problem. The City should monitor bacterial contamination to determine whether health hazards still exist.

Another study to determine the feasibility of re-routing the Creek would be to determine how much additional flood capacity would be provided by the new channel in conjunction with the culvert.

#### Remaining Impact 2: Potential Overloading of Sewers from Increased Use of Downtown [◐]

Mitigation Measure: The City should insure that the current program of sewer repair and improvement will be adequate to handle increased wastewater volumes that may be caused by the *Downtown Plan*. The *Public Facilities and Services* section of this chapter discusses the potential increases in wastewater generation under each of the four alternatives.



## PUBLIC FACILITIES AND SERVICES

### Introduction

Discussions with representatives of various service agencies/departments and analysis by the EIR consultant lead to the conclusion that most potential impacts would not vary significantly among the Alternatives with regard to public facilities and services. That is, the distinction between the no action alternative, the low intensity development alternative and the two scenarios of the *Downtown Plan* would not be appreciable in any but a few cases. Furthermore, each service provider would consider the impacts of individual development proposals on public services and facilities at the time that CEQA analysis is undertaken for each proposal.

The following section, therefore, departs from the heading structure used elsewhere in this report by grouping the treatment of all alternatives together. The special cases where distinctions can be drawn among alternatives are noted and quantified where appropriate.

Estimates of the costs of providing additional facilities and services under the *Downtown Plan* and a comparison among Alternatives are provided in the following section on *Fiscal* impacts. This *Public Facilities and Services* section addresses the physical demand for extra staff, supplies, equipment and facilities.

### Police Services

#### Existing Setting

The Berkeley Police Department provides police services to the Downtown from its headquarters at 2171 McKinley Avenue, approximately one block west of the western boundary of the Downtown Plan study area. The department includes a total staff of about 225 and a patrol force of 173. The ratio of sworn officers per 1,000 residents is 1.65.

Services provided by the department in the Downtown district include one foot patrol officer and vehicular patrols. The intensity of vehicular patrols is determined by the daily caseload (i.e., the number of cases generated by a particular area each day), resulting in a variable number of police patrol vehicles per area. Additional police services include the presentation of crime prevention seminars at businesses and organizing a "Business Watch" (phone tree) within each business neighborhood.

Currently most police cases in the downtown area are either burglary or automotive-related. Other incidents requiring police response take place in the BART station plaza (primarily pickpockets) or within retail outlets (shoplifting). Some theft (purses and wallets) also occurs in offices. Auto thefts most frequently occur in unattended parking lots. Because of the traffic congestion throughout downtown, parking violations and automobile accidents also require police response.<sup>76</sup>

#### Policies and Programs with Implications for Police Services

None of the proposed policies or programs would lead to significant adverse environmental impacts. The impacts of new development are addressed in the following subsection.

---

<sup>76</sup>Telephone Conversation, Lieutenant Hank Borders, City of Berkeley Police Department, 7 October 1988.



### **Impacts Due to New Development Allowable Under the Plan**

The increase in downtown office, retail, and residential uses allowed by the *Downtown Plan* alternatives, and the commensurate increase in persons and automobiles within the downtown area, would generate a need for additional police services. The ability of the Police Department to respond to this need will be dependent upon the relative demand from other areas in Berkeley and the size of the police force. Given existing staffing, unless a substantial reduction in crime were to occur throughout the rest of Berkeley, it is unlikely that current levels of police service could be maintained in an expanded or enlarged Downtown.

At minimum, given the proposed retail and other commercial development, the Police Department anticipates that one additional foot patrol would be needed in the downtown. Assuming current staffing rates, the increase in downtown population generated by the Maximum Bonus Alternative option would create a need for three additional police officers.

### **Public Improvements or Program Mitigation Measures Included in the Plan**

Three main goals shape all of the objectives, policies, and programs of the *Plan*. One of these goals (#2) speaks to the creation of an appealing and safe downtown with a comfortable pedestrian orientation, and out of this goal is developed a program (#7, page 33 and #9, page 61) to "provide police foot patrol on Shattuck and University Avenues". The responsibility for implementing the program would fall to the Police Department and the Plan recommends that funding be provided via the General Fund or an assessment district. Two officers patrolling the entire Downtown area during daytime hours would cost approximately \$92,300 according to the Plan.

Another series of linked programs (#3 through #5, page 32) involves the establishment of new art and cultural activities Downtown. If implemented, these ventures could increase the need for police presence Downtown during the proceedings, though one of the driving forces behind the goal of a safe and pedestrian-oriented downtown is that the increased levels of activity would lead to a safer setting.

Stricter enforcement of parking time limits is proposed on page 87 and would probably require a greater number of parking meter attendants and additional vehicles for their use.

### **Additional Mitigation Measures Recommended in this EIR**

Potential impacts could be mitigated by the following means.

Development plans for the downtown study area should incorporate crime deterrent design features both in building and landscape design. Plans for substantial renovation or new construction should be reviewed by the Police Department's Crime Prevention Officer to ensure that, where feasible, concepts are implemented that could decrease the number of criminal incidents by increasing the security of doors and windows.

Office/retail uses should consider contracting for private security in high risk areas.

Any new private or city-sponsored parking facility should employ security and attendant personnel at levels adequate to minimize demand for additional police department service.

Other possible mitigation measures for incorporation into parking facilities include: closed-circuit video monitoring of lobbies, elevator waiting areas, floors on which no attendant is present and stairwells; warning bells at vehicular exits to alert pedestrians and people in wheelchairs that a vehicle is approaching; and restrictions on stairwells to prevent movement between floors, with exit only allowed on the first floor.

## **Fire Protection**

### **Existing Setting**

The Berkeley Fire Department provides fire suppression services and administers the various state and local laws applicable to new construction and renovation of buildings in the Downtown.

The department currently has seven stations including seven engine companies, two truck companies and two ambulances. The primary provider to the downtown is Station #2 at 2025 Berkeley Way, while the secondary provider would be Station #5 at 2680 Shattuck Avenue. Each of these stations has one truck, one engine and one ambulance. Emergency response time to the Downtown is estimated at between 2 and 5 minutes.

The Uniform Fire Code (1979 edition) used by the City of Berkeley contains several requirements intended to reduce fire hazards and thereby minimize demand for the Department's services. Under the code, new buildings are required to provide adequate building access for fire fighting vehicles and sufficient fire flow volume. Calculation of the required fire flow volume is in accordance with an Insurance Service Office (ISO) publication, "Guide to Determination of Required Fire Flow" (1974 Edition). Additionally, the Fire Department participates in the City of Berkeley's development review process wherein recommendations regarding specific design characteristics or building materials are offered by the Department.

The *Downtown Plan* points out that as the amount of traffic in the Downtown increases, the response time of emergency vehicles also increases. Further, as taller structures are built downtown, fire suppression and rescue operations also become more difficult.

### **Policies and Programs with Implications for Fire Protection Services**

None of the proposed policies or programs would lead to significant adverse environmental impacts. The impacts of new development are addressed in the following subsection.

### **Impacts Due to New Development Allowable Under the Plan**

Should high-rise buildings be constructed in the *Downtown Plan* Study Area, additional requirements will be placed on the Fire Department for conducting annual inspections to ensure that fire suppression equipment and fixtures are working and satisfy the state requirements. Internal sprinkling systems and an onsite water supply are required by state law in high-rise buildings. Evacuation plans requiring Department review are also required for these structures.

In anticipation of growth in the Downtown area, the Fire Department has an ongoing program of upgrading its firefighting equipment including the introduction of larger volume hoses and larger capacity breathing apparatus.

Because nearly three-quarters of the total Fire Department responses to the Downtown are for emergency medical incidents, staff estimate that one new paramedic unit would eventually be required to handle the likely increase in calls brought about by new development.



## **Public Improvements or Program Mitigation Measures Included in the Plan**

The Berkeley Downtown Plan provides two policies addressing fire protection on page 41 and follows them with recommended ordinance and regulatory changes on page 42. The recommended changes focus on the development of additional fire and life safety regulations for new construction and renovation and include requirements for sprinkler protection, alarm systems and the possibility of smoke control equipment in buildings of a certain size and height. These recommended ordinance and regulatory changes would serve to mitigate other changes brought about by the Plan.

## **Additional Mitigation Measures Recommended in this EIR**

Potential impacts could be mitigated by the following means.

Plans for substantial renovation or new construction should be reviewed by the Fire Department to ensure that adequate fire prevention and suppression measures are incorporated into the design and building materials. Consistent with the goals and objectives of the *Plan*, developers of specific projects should be required to contribute toward the purchase of any new equipment or training required to protect the project.

No additional measures are needed to mitigate the effects of the Plan.

## **Water Supply**

### **Existing Setting**

The East Bay Municipal Utilities District (EBMUD) supplies the Downtown area with water. It levies two charges against new development: 1) A one-time "system capacity charge", which varies throughout the district to defray the costs associated with large-scale facilities and reservoirs (where necessary); and 2) a monthly charge based on the size of the meter used by the customer.

EBMUD is currently facing several major water supply problems. The problems are an increasing risk of failure of the Mokelumne Aqueducts, increasing shortages in dry periods, and increased difficulty in maintaining high quality drinking water. In response to these challenges EBMUD has developed the Water Supply Management Program. The Program identifies actions and projects necessary to solve these problems and involves three major elements: water banking, conservation and watershed improvements. The improvements are designed to increase the security of the water supply system during natural disasters, to meet dry year water demands in the future and to maintain the quality of supplied water. At this time, the Water Supply Management Plan is undergoing environmental review.

## **Policies and Programs with Implications for Water Supply Public Facilities and Services**

The Plan does not explicitly address water supply facilities except where it can be implied from the recommendations regarding a proposed growth management program. It is assumed by the authors of this report that one of the elements of such a program would be a requirement that an adequate water supply be available before development could proceed.

## **Impacts Due to New Development Allowable Under the Plan**

The 274,859 to 1,168,591 square feet of new development allowable under the four EIR alternatives would lead to increased water consumption in Berkeley. Table 40 projects water consumption for each alternative through the use of standard per unit multipliers.



Table 40

Projected Water and Sewage Generation:  
Berkeley Downtown Plan Alternatives

	Projected Development			Projected Usage	
	Office <sup>a</sup> (sq. ft.)	Retail <sup>b</sup> (sq. ft.)	Residential <sup>c</sup> (units)	Water (gallons/day)	Sewage <sup>d</sup> (gallons/day)
No Action Alternative	1,036,096	132,495	0	83,670	75,303
Base Alternative	608,918	208,837	268	119,084	107,175
Maximum Bonus Alternative	455,425	395,144	934	268,960	242,064
Low Intensity Alternative	274,859	0	696	167,770	150,993

<sup>a</sup> Rate assumed to be 25 gal./sq. ft./year (San Francisco Downtown Plan Appendix K).

<sup>b</sup> Rate assumed to be 35 gal./sq. ft./year (San Francisco Downtown Plan Appendix K).

<sup>c</sup> Rate assumed to be 214 gal./unit/day, per conversation with John Houlihan, EBMUD.

<sup>d</sup> Generation assumed to be 90 percent of total water usage.

Because residential units would be encouraged under the Base, Maximum and Low Intensity Alternatives, these three alternatives would generate more water usage than the No Action Alternative which does not assume any new residential units. The magnitude of the increase would not, however, represent a significant adverse impact. In fact, new development or renovation of existing structures would provide opportunities for the installation of modern, water conserving facilities and landscaping within projects, replacing older, less efficient systems.

#### **Public Improvements or Program Mitigation Measures Included in the Plan**

As noted above, the *Plan* includes reference to implementing a growth management program and elsewhere recommends coordination between the City and the University of California to insure that adequate public facilities are in place and natural resources available to serve new development.

#### **Additional Mitigation Measures Recommended in this EIR**

Potential impacts could be mitigated by the following means.

As part of the review by the Fire Department, a comparison of available fire flow water volumes and those necessitated by changes in use or new construction should be undertaken. Developers should fund any needed improvements to the water distribution system.

Water conserving features (e.g., water-conserving irrigation systems, low-water use landscape materials, water conserving toilets and appliances) should be designed into all new construction and, where feasible, added to planned renovations.

No additional measures are needed to mitigate the effects of the Plan. As would be the case with sewers, infill development would generally lead to efficiencies when compared to supplying water to new growth in undeveloped areas in the Bay Area. Furthermore, Berkeley is located in an area of moderate climatic conditions leading to lower per capita consumption of water than other parts of the EBMUD service area.

## **Sanitary Sewer**

### **Existing Setting**

The City of Berkeley owns and maintains the wastewater collection system which provides sanitary sewage collection within the City. The City's collection system conveys wastewater to an interceptor line operated by the East Bay Municipal Utilities District (EBMUD), which in turn transports the wastewater to the EBMUD treatment plant in Oakland near the Bay Bridge terminus. The EBMUD treatment plant currently processes about 90 million gallons per day (MGD) with an estimated capacity for peak wet weather primary treatment of 290 MGD and secondary treatment of 168 MGD. (See Figure 48 for locations of Downtown sanitary sewer pipes and manholes.)

A five-year long study examining the extent of stormwater inflow/infiltration into wastewater lines throughout the East Bay was completed in 1986. The results of that analysis indicate that infiltration of stormwater into sewer lines does occur in substantial volumes during storms and that the treatment plant becomes overloaded. The City of Berkeley is planning to appropriate several million dollars annually for a period of twenty years to replace and repair those sewer lines most subject to infiltration and inflow.

### **Policies and Programs with Implications for Sanitary Sewer Facilities and Service**

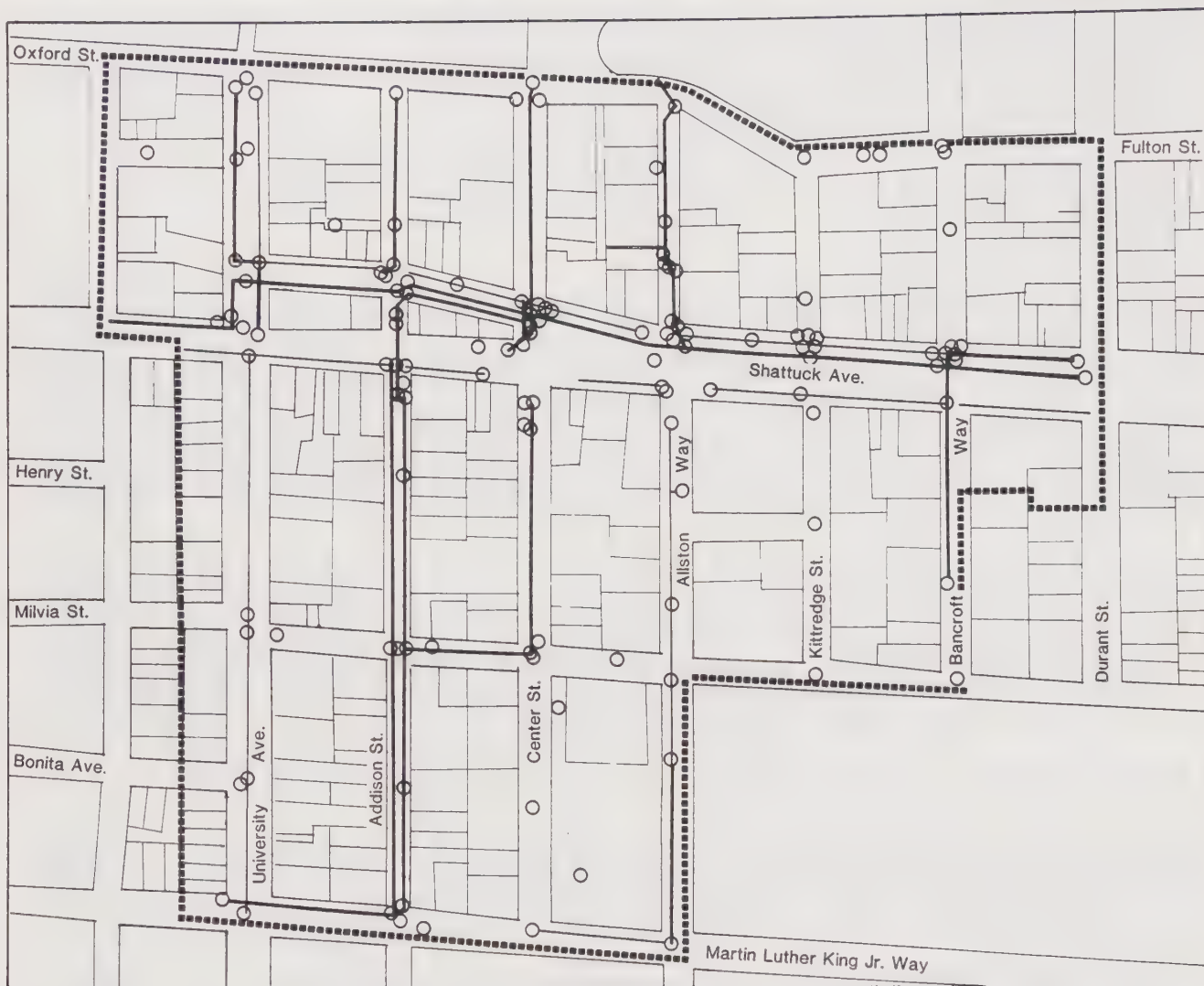
The Plan does not explicitly address sanitary sewer facilities except where it can be implied from the recommendations regarding a proposed growth management program. It is assumed by the authors of this report that one of the elements of such a program would be a requirement that adequate sewer facilities be available before development could proceed.

### **Impacts Due to New Development Allowable Under the Plan**

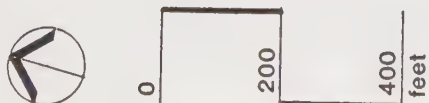
The 274,859 to 1,168,591 square feet of development allowable under the four alternatives would lead to an increase in wastewater for collection and treatment as new development is occupied. A conventional way of projecting wastewater generation is to assume a volume that is 90 percent of the overall water usage volume. Table 40 projects wastewater volumes for the EIR Alternatives.

As discussed earlier, while an increase in water usage will occur within the downtown under any of the alternatives, this increase would not constitute a significant adverse impact because new development can provide more efficient water conserving systems. Additionally, planned improvements to the sewer system will increase capacity through the reduction of infiltration and inflow.

A one-time wastewater capacity fee based on the estimated wastewater flow of individual residential developments as well as an on-going usage fee based on the metered amount of water actually used are charged by the City of Berkeley. The City is also currently expanding its sewer connection fee ordinance to specify a one-time fee for non-residential as well as residential development.



- 10+ Inch Sewer Pipes
- 8 Inch Sewer Pipes
- Man Holes



**Figure 48**  
**Sanitary Sewer Lines**



### **Public Improvements or Program Mitigation Measures Included in the Plan**

The Plan does not explicitly address wastewater collection and treatment except where the proposed growth management program would include this infrastructure among those which would have to function at some specified level of service before new development would be allowed.

### **Additional Mitigation Measures Recommended in this EIR**

Potential impacts could be mitigated by the following means.

If the additional wastewater flow generated by specific projects would cause the capacity of existing sewage lines to be exceeded, the developer would be responsible for the cost of upgrading the line as determined by the Department of Public Works.

No additional measures are needed to mitigate the effects of the Plan. It should be noted that infill development of an existing downtown like Berkeley's would generally lead to efficiencies when compared to providing sewage collection and treatment to new development on the urban fringe in areas not currently served by trunk or interceptor lines.

### **Solid Waste**

#### **Existing Setting**

The City of Berkeley operates its own refuse collection service for City residents and commercial businesses. Collected solid waste is transported to a landfill in eastern Alameda County on Vasco Road, which has an estimated life of over 30 years remaining. Users of the service are charged a fee which funds the operation.

The solid waste operation collects roughly 85,000 tons of waste annually, recycling nearly 16 percent of the total. This recycling is performed by private companies under contract to the City of Berkeley. As a goal in the City of Berkeley Solid Waste Management Plan (1986), the City would like to reach a recycling level of 50 percent of its total solid waste by 1991.

The bulk of recycled materials are currently obtained from curbside recycling in residential neighborhoods.<sup>45</sup> In commercial areas, a substantial portion of recyclable solid waste is either picked up by private companies or lost to the lack of separation among types of waste. To encourage more recycling in commercial areas, the City of Berkeley has established a weekly pickup service through the Elmwood Merchant's Association. Currently, approximately seventy businesses use this recycling service.

#### **Policies and Programs with Implications for Solid Waste Services**

None proposed.

#### **Impacts Due to New Development Allowable Under the Plan**

Estimates of the additional volumes of solid waste that would be generated by each of the four development alternatives are indicated in Table 41.

---

<sup>45</sup>Larry Seeman Associates, Inc., *Berkeley Waterfront Plan Program Environmental Impact Report*, June 1986.

Table 41

Projected Solid Waste Generation:  
Berkeley Downtown Plan Alternatives

	<u>Projected Development</u>			<u>Projected</u>
	<u>Office<sup>a</sup> (sq. ft.)</u>	<u>Retail<sup>a</sup> (sq. ft.)</u>	<u>Residential<sup>a</sup> (units)</u>	<u>Solid Waste Generated (tons/day)</u>
No Action Alternative	1,036,096	132,495	0	2.4
Base Alternative	608,918	208,837	268	2.1
Maximum Bonus Alternative	455,425	395,144	934	3.2
Low Intensity Alternative	274,859	0	696	1.6

<sup>a</sup> Overall rate for commercial, retail and residential was assumed to be 1.5 lb./sq. ft./year (San Francisco Downtown Plan Appendix K). Average size dwelling unit was assumed to be 750 square feet.

These new levels of solid waste generation would not constitute a significant adverse impact for the City. In fact, they hold the potential for a higher degree of recycling than the Citywide average if conditions of approval for new development in the Downtown were to incorporate measures aimed at recycling.

**Public Improvements or Program Mitigation Measures Included in the Plan**

None Proposed.

**Additional Mitigation Measures Recommended in this EIR**

Potential impacts could be mitigated by the following means.

Plans for substantial renovation or new construction should be reviewed by the Refuse Collection Division to ensure that adequate access would be provided for collection trucks and personnel.

Where feasible, new construction could be required to provide separate collection and storage areas for recyclable materials such as paper, glass and metal.

Development of a plan that would facilitate more recycling in the Downtown area and assist the City in meeting its recycling goals should be considered. Additional conditions and/or programs applying specifically to the Downtown core could be incorporated into the development review and approval process.

## FISCAL

### Introduction

Factors Affecting the Specificity and Accuracy of Fiscal Analysis. Comparing the potential fiscal implications of the *Plan's* programs and of the four alternative levels of Downtown development is complicated by a variety of factors.

First, data on the costs of providing municipal services (such as police, fire, road maintenance and general government) are not systematically compiled by service providers for the Downtown area. Second, and related to the first point, is that Berkeley residents mix with non-residents (jobholders who work there and shoppers who visit occasionally) in the Downtown. These factors preclude the assignment of costs in many of the standard ways.

Third, revenue forecasting for the development allowed by the *Berkeley Downtown Plan* must look at buildout, since we cannot predict the specific timing of development. A caveat to the reader, however, is that year by year results may vary in direction and magnitude from the buildout results.

Fourth, the policies and programs listed in the *Plan* document are often general in terms of their features, making evaluation of their cost or revenue implications difficult. In the case of those programs which have been refined to the point of having cost estimates prepared, most are described as having multiple funding sources, some of which are local and some of which are regional, state, federal or private. For this reason, the effects of some proposals on the City's treasury can only be described in equally general terms.

Methods of Fiscal Impact Calculation. As described in background reports prepared for the *Berkeley Downtown Plan* by the City's Office of Economic Development, there are at least a couple of methods of pursuing cost estimation for new development. One would be to use an "average costs" approach in which historic cost data on a standard-unit basis such as per capita or per square foot is assumed to represent the structure of future costs. This "top-down" approach uses broad historic trends to serve as proxies for future costs. A second method is a "bottom-up" approach which focuses on the specific new facilities or changes in service provision to determine the "marginal cost" by which new growth exceeds the cost of existing facilities and services. Each is used in this report as appropriate.

The key revenues to be included in this analysis (property tax, sales tax, business license fee, state subventions, utility users tax and transportation services fee) can be estimated on the basis of assumptions about the projected levels of development by land use. Therefore, the fiscal impacts of the *Downtown Plan* will be determined by the amounts and types of development that actually take place.

Fiscal Analysis of a Planning Document. In a program EIR like this one in which the alternatives are variations on a common set of goals, fiscal analysis is structured to compare the differences among alternatives indicating clearly the relative costs and revenues of each. The goal of computing comprehensive net fiscal impacts (primarily used by lead agencies for assignment of mitigation fees) is irrelevant in this situation. Fiscal analyses of plans for infill development of already developed urban core areas more often focus on (1) the magnitude of the plan's benefits, (2) the probability of their being fully realized and (3) a comparison of opportunities lost and gained by the implementation of each alternative.



The California Environmental Quality Act does not require analysis of public sector costs and revenues as part of the formal project review process. It is most often included in an EIR as a form of supplemental information for decisionmakers and, as such, it can be customized or focused in its scope. This report showcases several key fiscal indicators which provide an overview of the likely effects of each of the four alternative development scenarios; the chosen cost and revenue subtopics address the most prominent areas of likely change which would be brought about by the *Plan*. In addition, the numerous proposed policies and programs with fiscal implications are compiled and summarized in terms of the department(s) responsible for implementation and the potential sources of funding.

One evaluation this program EIR does not provide is that of the development feasibility of new projects under the regulations and incentives provided for in the *Plan*. Several analyses have been prepared as part of the *Downtown Plan* process in regard to the market for various land uses and have informed the design of the *Plan's* development regulations and incentives.<sup>77</sup> This section examines only public sector costs and revenues.

Furthermore, because the potential for significant adverse public sector cost impacts resides almost entirely with the City of Berkeley, this fiscal analysis focuses on the City's fiscal conditions. Other public agencies would obtain revenue benefits from the *Plan's* implementation (through sharing of property and retail sales tax revenues), but would experience little, if any, cost effects.

### **Existing Setting**

Citywide Costs. Three main areas of citywide costs would be most greatly affected by the type of growth allowed by the *Plan* and are evaluated: costs incurred in the areas of public works, public safety and general government. Taken as a group, these expenditure categories represent more than two-thirds of all City of Berkeley spending.

Public Works. The Public Works Department is responsible for maintaining and improving all public facilities and open spaces (including parks, the waterfront, street lights and signals); maintenance of streets and sewers; solid waste disposal and recycling; and engineering services for all city activities. It has a proposed budget for fiscal year (FY) 1988-89 of nearly \$60 million (including capital improvements of over \$23 million).

As noted in the *Public Services and Facilities* section above, the City imposes a variety of service and connection fees, many of which fund activities or facilities provided by the Public Works Department. The fees are intentionally set (and revised periodically) so that cost of the service or improvement can be easily calculated based on the project's characteristics and can be balanced by the fee revenues. In this way, most of the public works costs that would otherwise be imposed on the City as a result of serving new growth are neutral in effect.

Because the potential new construction or renovation allowed by the *Plan* would occur in a built-out downtown area in which the major infrastructure is already in place and no new major facilities are necessary, even the ongoing operations costs of the Department would be minimal.

---

<sup>77</sup> Angela Kucherenko, Office of Economic Development, City of Berkeley, *Downtown Plan Working Document - Economic Factors*, September 1987; Jacqueline Bernier, Campus Planning Office, University of California, Berkeley, Memorandum regarding the Relationship between Development Costs, City Regulations and Rents for Shattuck and Channing Street Housing Project", April 27, 1988.

The calculations below assume that new Berkeley residents and employees (daytime plus nighttime population with an adjustment for the roughly 30 percent resident employees) increase the ongoing maintenance costs of the Department at one half the current per-capita rate. In this way, new residents and employees are used as proxies for new development and as such are assumed to generate per-capita public works costs that are much less than historic per-capita costs.

Public Safety. The Public Safety Department combines both Police and Fire services. Its FY 1988-89 budget is over \$31 million. In addition to the costs resulting from new programs in the *Plan*, this Department would incur ongoing costs as a result of providing services to new residents in Berkeley. These costs have been estimated for new Berkeley residents and employees at the current per-capita rate.

General Government. Included in this category are the offices of the City Auditor, City Manager, City Clerk, Finance Department, Personal Department, Legal Department, Mayor and City Council. The FY 1988-89 budget for all of these services is roughly \$13 million. Of all city services, this group is least impacted by the type of new development envisioned in the *Downtown Plan*. A substantial increase in daytime employees or a small increase in residents would not require noticeable staff or facility upgrading in any of these cost areas, though some small ongoing cost increases could occur.

The calculations below assume that new Berkeley residents and employees increase the ongoing operating costs of general government at one half the current per-capita rate.

*The method of basing ongoing cost projections on daytime plus nighttime population at 100 percent or 50 percent of the current per-capita cost is a very conservative approach (i.e., one which insures that costs will not be underestimated). The actual cost impact of the allowable new development would almost surely be less than the results presented herein.*

Citywide Revenues. In the years since the passage of Proposition 13 (1978), cities throughout California have instituted a variety of charges and fees that have been imposed as a way of paying for services. The proliferation of these new forms of revenues has led to changes in the way that fiscal impact analyses are conducted. Because these charges and fees must legally be tied directly to the provision of a good or service, their levels are theoretically set at close to some break-even point; in terms of net fiscal impacts, their imposition is neutral and a double-counting of revenues would result unless the analogous service costs were specifically estimated as well. This has led to a situation in which there are fewer and fewer revenue sources that are other than neutral in their net effect.

Described below are five major municipal revenue sources which would generate new funds for Berkeley in ways that are not tied directly to the provision of goods or services. In addition, revenues from the one-time transportation services fee are also projected. The relative revenue-generation effects of these items vary among land uses and allow a comparison of the four EIR alternatives.

Property Tax. The City of Berkeley received approximately \$13.68 million in property tax revenues citywide in fiscal year (FY) 1987-88 and has projected a FY 1988-89 level of \$14.57 million, a 6.5 percent increase. This one source represents 38 percent of the revenue raised from the seven largest taxes levied by the City (property, sales, utility users, transient occupancy, parking lot, property transfer and business license).

The citywide assessed valuation which generates this revenue is estimated at \$3.55 billion in FY 1988-89.



The aggregated assessed valuation of those parcels most likely to experience new development or substantial renovation over the course of the life of the *Plan* is presently \$11.8 million.<sup>78</sup> This total assessed valuation is weighted heavily toward land value (roughly \$8.1 million) and includes only a relatively small value for improvements (such as buildings) and other machinery or equipment, personal or business property, a not surprising finding.

The County of Alameda collects the 1.0 percent property tax and distributes a portion back to a variety of local agencies (of which the City of Berkeley is one). The distributional formula for the collected revenue varies on the basis of the "tax code area" in which a given property is located; the tax code area in which the Downtown study area is located is number 13-000. The allocation formula for property tax revenue generated in this tax code area is shown below in Table 42.

What the table shows is that the City of Berkeley receives back from the county 40 percent of the total taxes collected, with the remainder distributed to the other local agencies listed.

In addition to the one percent property tax, several special assessments (presently totaling just under an additional 0.1 percent) apply in this tax code area. The increase in assessed value under the *Plan* would lead to small reductions in rates for all property owners.

Table 42

Allocation of Existing Property Tax Revenue

<u>Property Tax Recipient Agency/Fund</u>	<u>Percent Share of Property Tax Revenue</u>	<u>Distribution of Property Tax Revenue from Key Parcels</u>
County of Alameda, General Fund	0.2903	\$34,142
Peralta Community College District	0.0249	2,923
Berkeley Unified Schools, General Fund	0.1816	21,353
Sch Instit Pupils	0.0014	162
Juvenile Hall Education	0.0003	34
County Superintendent Schools (Service)	0.0009	101
County Superintendent Schools (Capital)	0.0007	78
Sch Develop Center	0.0008	94
County Flood Control District	0.0017	205
Bay Area Air Quality Management District	0.0017	205
Mosquito Abatement	0.0012	137
AC Transit	0.0435	5,120
Bay Area Rapid Transit (BART)	0.0051	6,012
East Bay Regional Park District	0.0244	2,875
East Bay Municipal Utilities District (EBMUD)	0.0136	1,603
EBMUD (Special District #1)	0.0049	572
City of Berkeley	0.4030	47,398
<b>Total</b>	<b>1.0000</b>	<b>\$117,604</b>

Source: Percent share of property tax revenue provided by Office of Auditor-Controller, County of Alameda, October 1988. Property tax revenue estimates are rounded to nearest whole number.

<sup>78</sup>County of Alameda property tax records were reviewed and data compiled by Mundie & Associates.



Retail Sales Tax. The City of Berkeley received approximately \$8.72 million in retail sales tax revenues citywide in FY 1987-88 and has projected a FY 1988-89 level of \$8.98 million, a 3.0 percent increase. This one source represents 24 percent of the revenue raised from the seven largest taxes.

The State of California collects the retail sales tax and disburses back 1.0 of the 6.5 percent for purchases that were made within Berkeley.

Business License Fees. Business license fees collected in FY 1987-88 totaled \$4.18 million and are expected to remain the same or decrease slightly in FY 1988-89. This one source represents 12 percent of the revenue raised from the seven largest taxes.

The tax is imposed on all businesses located in or having sales derived in the City of Berkeley and is based on gross receipts of the business.

State Subventions. The State of California passes back to communities a variety of revenues such as motor vehicle in-lieu fees, cigarette taxes and others, generally on the basis of resident population or some other measure for which resident population is an appropriate proxy. In recent years, these subventions in the City of Berkeley have totaled around \$4.5 million annually.

In the current fiscal year, the City of Berkeley will receive approximately \$40 per-capita in various state subventions distributed on the basis of population.

Utility Users Tax. The City imposes this tax on use of gas, electrical and interstate telephone services and currently obtains about \$5.6 million annually from this source.

Transportation Services Fee. The City imposes a one-time fee of \$2.00 per gross square foot of new development to offset the cost of citywide transportation improvements necessitated by new growth. The calculated fee can be paid in one lump sum or according to a schedule of annual payments.

*These six major revenue sources thus represent well over three quarters of all the municipal revenue collected from the seven largest tax sources. As with the cost categories included above, these revenues are broad indicators of the major fiscal differences among the four alternatives.*

The Fiscal Effects of Recent Trends in Downtown Berkeley. The City's budget document for FY 1988-89 includes an introductory memorandum from the City Manager which provides an overview of several salient trends affecting the City's fiscal health. Among the points made are the following:

- ☐ Proceeds from the taxes the City has traditionally relied on (property tax, retail sales tax and business license fees) are no longer growing once inflation is taken into account and newer revenue sources (property transfer tax and utility tax) are also expected to remain stable.
- ☐ Federal and state subventions are also showing reductions.
- ☐ The projection for the FY 1988-89 bottom line show a balance, but subsequent years show deficits, beginning in FY 1989-90 when the shortfall is expected to reach \$3,359,000 and extending out to FY 1993-94 when the projected shortfall is \$8,136,000.

- Appropriations subject to the Gann Appropriation Limitation (Proposition 4) would total \$47,874,040 for FY 1988-89: approximately \$3,223,096 less than the \$51,097,136 allowable under the law. In other words, the City has a relatively comfortable margin of 6.3 percent before it reaches its Gann spending limit.

### **Policies and Programs with Fiscal Implications**

Throughout the *Berkeley Downtown Plan* policies and programs are proposed that would result in explicit fiscal consequences. Some new programs would require City funds to implement; others could be funded through grants or earmarked funds from state, federal or private sources. Several policies would also be expected to enhance municipal revenues over the long run.

In general, new policies and programs with the potential for significant fiscal implications would apply equally across the four alternative development scenarios. The varying levels of new development (or redevelopment of existing structures) projected in the four alternatives would have differential fiscal effects, and those impacts are analyzed in the following subsection.

The following policies and programs are proposed in the *Berkeley Downtown Plan* and could have fiscal consequences of a significant magnitude. Other policies or programs may have minor fiscal costs or benefits, but are either too speculative or inconsequential (in dollar terms) to merit consideration here. Each policy and program that is considered is listed in the order in which it occurs in the *Plan*, referenced by page number and briefly summarized in terms of who is responsible for its implementation and what are its estimated costs or benefits. Combinations of multiple policies and programs are listed where the *Plan* itself combines them for purposes of cost estimation.

- A variety of ordinance and regulatory changes proposed in the Historic Preservation and Urban Design Element and implementation of revisions to the Design Review process (pp. 20-26).

Responsibility for implementing this aggregated set of programs and procedural changes would fall to the Planning and Community Development Department. The cost of preparing special guidelines for each of the Downtown subareas is estimated at \$25,000. An additional \$200,000 for consulting services is also listed.

- Center Street Design Plan (pp. 26-27).

Responsibility is listed as falling to three City commissions, two departments, the University of California and property owners. Funding would stem from City general funds, the University and property owners. No cost estimate is listed.

- Facade Restoration Program (p. 27).

City staff working with the Berkeley Architectural Heritage Association (BAHA) would seek funding for a workshop, materials and report production. The total cost is unknown.

- Establish City-sponsored tax breaks or incentives for maintenance, restoration and reuse of historic structures (p. 28).

Investigate the use of public funding to: a) purchase, restore and resell historic structures (especially residential hotels); b) purchase threatened historical properties, attach preservation covenant and then resell the property; and c) purchase historic easements along Shattuck Avenue.

The Planning and Community Development Department and the Finance Department along with the Landmarks Preservation Commission would implement this program, to be funded through several sources including: Mills Act; U.S. Department of Housing and Urban Development; Section 701 Planning Assistance Grants; and the State Beach, Park, Recreational and Historical Facilities Bond Act of 1974.

The total cost to the City of this program has not been estimated.

- Increase the police foot patrol along University and Shattuck Avenues (p. 33).

The Public Safety Department would be responsible for implementing this program and funding would derive from either the City's General Fund or a benefit assessment district. The costs have been estimated at \$93,000 annually.

- Prepare a feasibility study to consider uncovering Strawberry Creek and, depending on the outcome of this study, contract for planning, engineering and design services for the development of a plan (p. 38).

The responsible department would be Public Works. The initial feasibility study cost is estimated at \$10,000; costs of subsequent studies and preparation of the plan are not listed.

- Undertake a study to determine the need for additional regulations on below-grade construction within the Downtown due to the level of the water table (p. 38).

The Planning and Community Development and Public Works Departments would oversee the study which has been estimated to cost somewhere between \$10,000 and \$50,000.

- Acquire property for the Strawberry Creek project should studies determine it feasible (p. 38).

Land acquisition costs are estimated at about \$7 million and the project would be the responsibility of the City Finance Department.

- Construction project(s) in the uncovered creek open space area (p. 38).

The Public Works Department would carry out the project and the costs have not yet been estimated.

- Design new fire and life safety regulations (in addition to those in the Fire Code) for application to high rise and low rise new construction and renovation in the Downtown (p. 42).

The Codes and Inspection Division of the Fire Department would formulate and administer this program. Ordinance revisions would be funded out of the general fund and from fees from the developers of new projects. The fee structure has not been estimated at this time.



- Develop a street tree planting plan (including facilities for sitting areas for pedestrians) (p. 47).

The Public Works Department would be responsible for creating and operating this short term capital improvement in which funding would be sought from grants or some kind of "creative donation" program. The cost of trees, benches and other amenities has been estimated at \$50,000 per block.

- Improve landscape maintenance along Shattuck Avenue and establish more frequent and seasonal plantings in the planter beds (p. 47).

This short term capital improvement would be administered by the Public Works Department and funded via a benefit assessment district or through the general fund.

- Establish a special program for landscape and environmental improvements, maintenance of street trees, integrated pest management and sidewalk cleaning along University Avenue.

The Department of Public Works, working with the Chamber of Commerce and the Downtown merchants would have responsibility for this program and it would be funded out of the general fund, a benefit assessment district and/or Chamber of Commerce resources.

- Improve night-lighting, sidewalk paving and add pedestrian curb cuts at intersections where needed (p. 48).

This short term capital improvement would be administered by the Public Works Department and funded via a benefit assessment district or through the general fund.

- Plan for the redesign of the Civic Center area (p. 48).

Responsibility for this proposal would jointly reside with the Departments of Planning and Community Development and Public Works, the Civic Arts and Parks and Recreation Commissions, Alameda County and the Berkeley Unified School District.

The costs associated with this undertaking (up to and including working drawings and construction cost estimates) have been forecast at about \$100,000. According to the *Plan*, grants and other sources of funding would be explored.

- Plan for the redesign of the BART Plaza area (p. 48).

The same responsible agencies would be involved as for the Civic Center planning effort, with the substitution of the Bay Area Rapid Transit District for Alameda County. The cost for this program has also been estimated at \$100,000.

- Design an economic development program to attract a retail anchor to the Downtown (p. 60).

Funding possibilities include the general fund or a benefit assessment district. This program would be coordinated by the City Office of Economic Development, Downtown merchants and property owners.

- Require new development over 40,000 square feet to mitigate the costs of its impacts as described in the forthcoming citywide mitigation ordinance; included here are mitigation payments for housing, transportation, child care and public services (pp. 60 and 61).

The Planning and Community Development Department and the Office of Economic Development would oversee this program which would be funded primarily from the fees paid by applicants at the time of development review. The fiscal implications of this program are positive from the perspective of the City of Berkeley.

- Establish a Transportation Services Fee (TSF) of \$0.20 per square foot of gross floor area for new construction, additions and changes in use (p. 82).

The Planning and Community Development Department would administer this program, estimated to cost only a small amount to operate but likely to generate large revenues to the City.

- Conduct a feasibility study for a parking facility at potential locations on Berkeley Way, on Oxford Street and in the Civic Center area (p. 83).

Joint responsibility for this study would rest with the Departments of Public Works, Planning and Finance, with Finance taking the lead. The cost of the study has not been estimated but all or a portion may come from the general fund.

- Provide bus shelters and, where shelters are not physically appropriate, install additional benches (p. 85).

The Department of Public Works in conjunction with AC Transit would be responsible for this short term capital improvement project. The cost would be approximately \$25,000 and would derive from AC Transit or the City.

- Increase enforcement of on-street parking limits.

The Parking Division of the Public Safety Department would be responsible for this program, expected to cost a total of \$30,000 annually; revenue generated is projected to reach \$40,000 per year, resulting in a new benefit to the City.

- Construct minor traffic improvements to existing roadway network as identified by Cambridge Systematics in earlier *Berkeley Downtown Plan* background documents (p. 87).

The Department of Public Works would address these short term improvements partly using funds provided as mitigation payments for the Golden Bear project and partly through its ongoing operating budget. The estimated cost is \$32,000.

At the end of the Circulation and Transportation Element are listed three major long term capital improvement projects. Each would require detailed studies prior to implementation and all would have to secure funding. The Departments of Public Works and Planning would serve as the key responsible departments. These three projects (which are analyzed in terms of their traffic impacts above in the EIR section on *Transportation*) include:

- Construct a parking facility in the Downtown for approximately 300 vehicles. The proposal has been outlined in more detail through the specification of several steps than would have to be taken including:
  - Conduct a feasibility study of alternative locations for garage(s).
  - Establish the method of financing the parking facility.
  - Design the parking facility and obtain accurate cost estimates.
  - Prepare and issue the bid package for the construction of the project.
- Construct satellite parking lots for approximately 200 parking spaces with a shuttle bus service to the Downtown
- Reconstruct Shattuck Square and Shattuck Avenue between University Avenue and Center Street.

The University of California element of the *Plan* (pp. 90 - 94) includes several programs or policies which, if implemented by U.C., would produce beneficial fiscal effects for the City of Berkeley. One recommendation is that U.C. support new housing that would not remove land from the property tax rolls. Another theme is that U.C. should pay mitigation fees adequate to minimize impacts on public services and facilities (as well other environmental areas).

However, these potential beneficial effects are beyond the control of the City of Berkeley to implement and are simply too conjectural to measure at this point in time.

In addition to these policies and programs that have cost estimates in the *Plan* document, dozens of other programs are listed throughout the *Plan* with the response at the funding line: "incorporate into Department work program". These programs would also have fiscal implications, but the programs are not clearly defined enough yet for cost estimation.

### **Summary of the Plan's Fiscal Implications**

Impacts Common to One or More Alternatives: Costs of the policies and programs listed above would accrue for both of the *Plan*-based alternatives (#2 and 3) and probably for the Low Intensity Development also. Based on the assumption that all development outlined in the project description under each alternative would occur, revenues would rise for each of the alternatives as well.

Costs. The total order-of-magnitude one-time cost of those programs for which cost estimates have been prepared (excluding the Strawberry Creek project), is in the neighborhood of \$1.2 million with an annual commitment of at least \$100,000 required to run those programs with ongoing costs. The Strawberry Creek project would require in the neighborhood of \$7 million for land acquisition alone and an unidentified level of funding for construction and operation. As noted in the individual paragraph writeups above, several of the programs have not been fully costed by staff or represent only best guesses at this point; the total costs - one-time and ongoing - would surely be higher.

As with planning documents generally, each capital improvement or ongoing program proposed in the *Downtown Plan* would have to be further analyzed and refined prior to implementation.



Revenues. Revenues generated by the projected levels of development that form the project description for each alternative would increase over the base conditions for the 24 parcels subject to new development. Relative revenue generating potential for each alternative is compared below.

Fiscal Comparison of the Four Alternatives. Table 44 (p. 225) summarizes how costs and revenues specifically generated by new development under the four alternatives would effect fiscal conditions in the City of Berkeley.

Costs. The costs of providing the three major public services to new development under the plan would vary, from greatest to least, by a factor of two. Projections of additional costs due to new Downtown residents and employees have been prepared using the per capita approach described above. These combined annual costs of the major categories (public works, public safety and general government) would range from \$0.9 million annually for Alternative 4 to \$1.8 million for Alternative 3. Alternative 1 and 2 would cost roughly \$1.1 million annually.

The four alternatives could also vary in terms of the costs of capital projects included in each alternative or which would be required to accommodate allowable growth under each alternative. Clearly the two plan-based alternatives involve more public improvements than the No Action Alternative. The Maximum Bonus Alternative would also require several traffic improvements due to its higher total trip generation. Because the total costs of all improvements have not yet been fully specified and the funding responsibilities cannot be assigned, it is not possible to conclude definitively whether the *Plan's* goals can be funded with available resources.

Revenues. The annual revenues generated would range from just over \$1.2 million in the case of the Low Intensity Alternative to over \$2.5 million in the case of the Maximum Alternative.

Property Tax. The highest level of property tax generation, far exceeding the other scenarios, would result from the Maximum Alternative with its emphasis on residential units and relatively large amount of retail space as well. The Low Intensity Alternative would generate the second highest level of property tax revenue, followed closely by the Base Alternative and the No Action Alternative.

Projection of property tax revenues for each alternative is based on estimated assessed values of new development at buildout. The results presented below are net of the existing property tax revenues produced on the 24 parcels.

Table 43 demonstrates how the projected net new property tax revenue from each of the four alternatives would be distributed among the various recipient agencies and funds.

Table 43

Allocation of Projected Property Tax Revenue  
by Alternative

Property Tax Recipient Agency	Percent Share of Property Tax	Distribution of Property Tax Revenue			
		Alt. 1	Alt. 2	Alt. 3	Alt. 4
Co. of Alameda, General Fund	0.2903	\$395,369	\$321,554	\$427,271	\$233,190
Peralta Com. College Dist.	0.0249	33,847	27,528	36,578	19,963
Berkeley U.S.D., General Fund	0.1816	247,269	201,104	267,222	145,840
Sch Instit Pupils	0.0014	1,880	1,529	2,031	1,109
Juvenile Hall Education	0.0003	389	316	420	229
County Supt. Schools (Service)	0.0009	1,168	950	1,262	689
County Supt. Schools (Capital)	0.0007	900	732	972	531
Sch Develop Center	0.0008	1,092	888	1,181	644
County Flood Control Dist.	0.0017	2,369	1,927	2,560	1,397
Bay Area Air Quality Mngt. Dist	0.0017	2,371	1,928	2,562	1,398
Mosquito Abatement	0.0012	1,581	1,286	1,708	932
AC Transit	0.0435	59,288	48,219	64,072	34,968
Bay Area Rapid Transit (BART)	0.0511	6,962	5,662	7,523	4,106
East Bay Regional Park Dist.	0.0244	33,291	27,075	35,977	19,635
EBMUD	0.0136	18,565	15,099	20,063	10,950
EBMUD (Special Dist. #1)	0.0049	6,626	5,389	7,161	3,908
City of Berkeley	0.4030	548,868	446,395	593,157	323,725
Total	1.0000	\$1,361,834	\$1,107,580	\$1,471,722	\$803,215

Source: Percent share of property tax revenue provided by Office of Auditor-Controller, County of Alameda, October 1988.

Retail Sales Tax. Potential for net new retail sales taxes would be greatest under the Maximum Alternative, which is projected at nearly \$1.0 million annually. The No Action and Base Alternatives would range from \$0.5 - 0.6 million, while the Low Intensity Alternative would bring up the rear at \$0.1 million.

These projections include tax generated both from the allowable new retail space in the Downtown and from spending by new Berkeley residents.

Business License Tax. Office land uses generate this tax revenue at a rate which far exceeds retail uses. The highest level of office development in the Downtown and therefore the greatest increase in this revenue source would result from the No Action Alternative. The Base Alternative, Maximum Alternative and Low Intensity Alternative would follow in that order.

State Subventions. Alternatives 1 and 2 with little or no new population Downtown would result in less than \$23,000 annually in additional state subventions. Alternatives 3 and 4 would boost this amount by between \$60,000 and \$80,000.

Utility Users Tax. Alternatives 1, 2 and 3 would generate in the range of \$55,000 to \$75,000 annually in new state subvention revenues based on the increased utility use Downtown. Alternative 4 would only generate \$18,000 annually.

*Transportation Services Fee.* The increase in new construction allowable under the four alternatives would generate Transportation Services Fees of between \$1.6 million (for the Low Intensity Alternative) and \$3.1 million (for the Maximum Bonus Alternative). In addition, the *Plan* proposes a much smaller (\$0.20 per gross square foot) Transportation Services Fee for changes in use as well as new construction.

Table 44

Comparison of Annual Fiscal Impacts of Four Development Alternatives  
(\$ Million)

	No Action Alt. _____	Downtown Plan - Base Alt. _____	Downtown Plan - Maximum Alt. _____	Low Intensity Alt. _____
<u>Costs</u>				
Public Works	0.4	0.4	0.6	0.3
Public Safety	0.6	0.6	1.0	0.5
General Government	0.1	0.1	0.2	0.1
	_____	_____	_____	_____
Sum of Major Ongoing Costs	1.1	1.1	1.8	0.9
Ongoing Costs of Policies and Programs in Plan	n.a.	0.1	0.1	0.1
<u>Revenues</u>				
Property Tax	0.5	0.4	0.6	0.3
Retail Sales Tax	0.5	0.6	0.9	0.1
Business License Tax	0.7	0.4	0.4	0.2
State Subventions and Utility Users Tax	0.1	0.1	0.1	0.1
	_____	_____	_____	_____
Sum of Major Annual Taxes	1.8	1.5	2.0	0.7
Net Comparison of Annual Costs and Revenues	+0.7	+0.3	+0.1	-0.3
<i>One-time Transportation Services Fee</i>	2.3	2.0	3.1	1.6

Note: Other City mitigation fees (e.g., housing and childcare) are projected in the Socioeconomics section of Chapter IV.

Source: Mundie & Associates



Significance of Fiscal Effects. The summary comparison of annual costs and revenues shows that even with the very conservative cost-estimating techniques used above, the annual balance of the two *Plan*-based alternatives would be positive. The high proportion of office development allowable under the No Action Alternative accounts for its showing as the scenario with the greatest annual net benefit. However, as emphasized throughout this report, the likelihood that the allowable level of office development would actually be constructed is quite low in the near term. The mixed-use emphases of the *Plan*-based alternatives could in some ways be considered a choice with greater fiscal rewards once this risk factor is taken into account. The heavy emphasis in the Low Intensity Alternative on residential growth - which generates lower revenues and requires proportionally greater services - may result in a fiscal deficit (an outcome which is not unexpected and even likely to worsen over time due to complexities inherent in Proposition 13).

In addition to the annual cost/revenue benefits of the *Plan*, the one-time Transportation Services Fee would generate \$2-3 million that could be used to fund some of the *Plan*'s proposed improvements.

What this analysis does show are the relative effects of each alternative and that the relationship of costs and revenues is not slanted in one direction in a way that would leave the *Plan* an unrealistic document. For this reason, the critical choices that will be made by Berkeley decisionmakers among elements of these alternatives need not hinge on fiscal grounds.

#### Additional Mitigation Measures Recommended by this EIR

Remaining Impact 1: The conceptual nature of many programs and absence of feasibility analysis or cost estimates for some capital improvements preclude definitive answers to fiscal questions. [⊖]

Mitigation Measure: Prior to implementing these programs and capital improvements, the City will have to undertake the necessary studies to determine feasibility, refine cost estimates and determine funding mechanisms for these programs and facilities.

Examples of major programs and capital projects which would require additional study before definitive fiscal conclusions could be reached include the following (page references are from the *Plan*):

- ◇ Center Street Design Plan (pp. 26-27).
- ◇ City-sponsored tax breaks or incentives for maintenance, restoration and reuse of historic structures (p. 28).
- ◇ Feasibility study, property acquisition and construction projects for uncovering Strawberry Creek (p. 38).
- ◇ Downtown parking facility (p. 88).

## CHAPTER V

### CUMULATIVE AND GROWTH INDUCING IMPACTS OF THE PROJECT

The California Environmental Quality Act (CEQA) requires cumulative impacts to be discussed in environmental impact reports. Cumulative impacts are two or more individual effects which, when measured together, are considerable or which compound to increase environmental effects. Projects examined in the cumulative analysis include similar past, present and reasonably foreseeable future projects both within and outside the control of the lead agency.

Growth inducing effects of the project must also be considered under CEQA. Analysis of growth inducing effects focuses on those ways in which the proposed project could foster economic or population growth, or remove existing obstacles to such growth.

#### CUMULATIVE IMPACTS

The Downtown study area has experienced several developments which have added space in the office and retail categories over the past year or two. Adjacent to the study area, the University of California is in the process of constructing additional space in academic, laboratory, office, student housing and service uses and planning for additional growth through the year 2005. In addition, the City of Berkeley is located in a regional economy which continues to experience growth in jobs, housing demand and traffic.

Projections of future growth in Downtown Berkeley, at the University and throughout the region (using a background growth factor to account for development elsewhere in the East Bay) have been compiled so that the key environmental issues which have a cumulative aspect can be quantitatively analyzed. These issues include traffic congestion, parking provision, air quality, noise and the need for public services. The projections of future development (including existing development which is less than fully occupied) have been assembled by the EIR consultant and City staff. City records and discussions with representatives of the University provided the basis for these projections which are presented in Table 45. The list of University projects is based on a preliminary version of the project list which will appear in the Long Range Development Plan (LRDP) for the Berkeley campus (which is expected to be published in 1989). The list shown in this EIR includes potential projects of 10,000 square feet or greater. Project description data used in this EIR for the *Berkeley Downtown Plan* (Tables 2-6 and accompanying text) were provided to the University and to its EIR consultant in September 1988.

It should be noted that while Table 45 does not repeat the projected levels of Downtown development under the *Plan* (Tables 3 through 6), their net impacts are included in the analysis.

Potential impacts on several of the resources and urban systems discussed throughout this EIR could result from the implementation of the *Plan* and from the projected levels of cumulative development. The magnitude of these impacts and their significance have been examined quantitatively and described in Chapter IV for topics on which mitigation of cumulative conditions is integral to the analysis: transportation (pp. 127-164), air quality (pp. 165-171), noise (p. 171-178) and public services (pp. 204-212). Mitigation measures included as part of the *Plan* or recommended as part of this EIR would reduce all potential impacts to levels below the threshold of significance.

[Text continues on page 234.]

Table 45

## Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
<i><u>Proposed Private Sector Projects:</u></i>			
Oxford House 1899 Oxford	Residential	29 du	On hold
2161 Allston Way	Office Retail	34,260 s.f. 4,400 s.f.	Project denied
The Promenade 1936 University Avenue	Office Retail	31,660 s.f. 15,520 s.f.	EIR in preparation
1849 Shattuck Ave.	Office Retail	7,000 s.f.	Neg. Dec proposed

*University of California, Berkeley Projects<sup>a</sup>*Approved Projects (included in the University Capital Improvement Program)

Genetics and Plant Biology Building (including north- west parking facility) - Central Campus	Lab & Academic	157,360 s.f. and 96,600 s.f. pkgng	Supplemental EIR filed 9/87 (3/89)
Renovation of Life Sciences Bldg. - Central Campus	Lab & Academic	33,000 s.f.	EIR completed 1983 (3/93)
Northwest Animal Facility - Central Campus	Lab & Academic	55,000 s.f.	EIR completed 1987 (4/90)
Genetics and Plant Biology Greenhouse - Oxford Tract	Lab	17,600 s.f.	Negative Declaration 10/86 (9/88)



Table 45 (Continued)

## Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
<i>University of California, Berkeley Projects (Continued)</i>			
<u>Approved Projects (included in the University Capital Improvement Program) (Continued)</u>			
Business Administration Bldg. & removal of Cowell Hall - Central Campus	Office/ Academic	204,100 s.f.	EIR in preparation (1992)
Computer Science Building - East of Etcheverry Hall	Office/ Academic	100,000 s.f.	EIR in preparation (1992)
Lawrence Hall of Science Additions and Alterations (Step 1) - Lawrence Hall of Science site	Office/ Academic	27,342 s.f.	Initial Study in preparation (1990)
Doe and Moffitt Libraries Additions and Seismic Improvements - Central Campus	Library	200,000 s.f.	Subsequent IS or EIR to be prepared (1994)
College of Chemistry Unit III - Central Campus	Lab	106,000 s.f.	Negative Declaration 5/83 (1993)
Foothill Student Housing - Hearst/Oxford	Residential	230,973 s.f. 760 beds	EIR completed 3/88 (1989)
Shattuck and Channing Student Housing - SE Corner of Shattuck and Channing	Residential	100,523 s.f. 157 beds includes 9,670 s.f. retail	Initial Study completed 3/88 (1989)

Table 45 (Continued)

## Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
--------------------------------------	--------------------	---------------------------------------	---

University of California, Berkeley Projects (Continued)Proposed but Not Approved Projects (likely to occur before the year 2000) (Continued)

Lawrence Hall of Science Additions and Alterations - Upper Hill Area, Lawrence Hall of Science Site	Office/ Academic	11,683 s.f.	Initial Study in preparation
Additional University Student Housing -			
Telegraph Neighborhood	Residential	1,325 beds	---- <sup>b</sup>
Clark Kerr Campus	Residential	215 beds	----
I-House Infill	Residential	75 beds	----
Other Opportunities	Residential	140 beds	----
Northside	Residential	45 beds	----
South Shattuck Avenue and Other Opportunities in Berkeley	Residential	1,000 beds plus 62,200 s.f. of retail	----
Oxford Tract Development - Southern Portion (Step 1)	---- <sup>c</sup>	129,000 s.f.	----
Relocation of Campus Units to Richmond Field Station	----	----	EIR to be prepared

Table 45 (Continued)

## Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
--------------------------------------	--------------------	---------------------------------------	---

University of California, Berkeley Projects (Continued)Proposed but Not Approved Projects (likely to occur before the year 2000) (Continued)

Albany and Northwest Berkeley Develop- ment - Sites to be Determined	----	600 beds	EIR to be prepared
Child Care Facilities - Sites to be Determined	----	----	----
Student Health Service Project - Bancroft/Dana Site	----	56,600 s.f. includes 8,000 s.f. retail	----
Student Services Project to Replace T-Buildings - Central Campus	----	60,000 s.f.	----
ROTC Facility - Central Campus	----	16,000 s.f.	----
UC Garage Site Development - 1940-1952 Oxford	----	160,000 s.f.	----
Systemwide and UC Printing Plant Site Develop- ment 2120 Oxford and 2015 Center	----	144,000 s.f.	----
Dwinelle Hall Expansion - Central Campus	----	48,000 s.f.	----



Table 45 (Continued)  
Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
<u>University of California, Berkeley Projects (Continued)</u>			
<u>Proposed but Not Approved Projects (likely to occur before the year 2000) (Continued)</u>			
University Hall and University Hall Parking - 2199 Addison	----	156,630 s.f.	---- (2/91)
Relocation of Optometry and other Cowell Hospital Functions - Various Locations	----	29,000 s.f.	----
Morrison Hall Addition - Central Campus	----	10,100 s.f.	----
<u>Lawrence Berkeley Laboratory Projects</u>			
Total Lawrence Berkeley Laboratory Projects - Various Locations (most at Central Research Facility or Original Lab Site)	Lab/Office/ Other	244,000 s.f.	EIR for LBL-LRDP Completed 1986-87 (Various occupancy dates between 1989 and 1997)
<u>Proposed (Non-UC) Public Sector Projects</u>			
California Dept. of Health Services 2151 Berkeley Way	Office	85,600 s.f.	EIR in preparation
Alameda County Courthouse 2120 MLK Way	Office	120,000 s.f.	EIR required

Table 45 (Continued)

## Cumulative Development List

<u>Project Name and Location</u>	<u>Land Use(s)</u>	<u>Units/Gross Square Footage</u>	<u>Status (and Date of Occupancy)</u>
<i><u>Existing Buildings:</u></i>			
Golden Bear Bldg. 1995 University	Office	142,600 s.f.	74% occupied
	Retail	18,000 s.f.	79% leased
ELS Building 2030 Addison	Office	28,000 s.f.	80% occupied
	Retail	10,000 s.f.	
2399 Shattuck	Office	14,000 s.f.	23% occupied
	Retail		42% leased
Oxford Court 2150 Kittredge	Office	20,000 s.f.	87% occupied
	Retail	4,000 s.f.	

<sup>a</sup>According to staff from the Campus Planning Office, projects under the University of California, Berkeley listing are subject to change until the publication of the Long Range Development Plan (under preparation at this time). Cumulative analysis undertaken for the Berkeley Downtown Plan EIR relies on the projects listed here.

<sup>b</sup>Many potential UC projects that are proposed but not yet approved do not have an estimated date of occupancy.

<sup>c</sup>Potential UC projects lacking a general land use designation represent developable sites or development concepts which have not yet be specified as to their end uses.

Source: Information assembled and tabulated by Mundie & Associates on the basis of data compiled by the City of Berkeley and a working draft version of the University's project list supplied by Earth Metrics (initial EIR consultant on the Long Range Development Plan for the University of California, Berkeley).

On the topics of hazardous waste/toxics impacts, geology and soils impacts, and hydrology and water quality impacts, the cumulative impacts are not expected to be significant. These resources are subject to ongoing state, regional and local regulation and monitoring to insure that significant adverse impacts of development are minimized.

The potential cumulative land use impacts of the plan-based alternatives would involve a gradual shift in the Downtown (on those parcels which are not already fully utilized) in the ways described in the *Land Use and Planning* impacts section. It is critical to remember that the new development allowable under the EIR alternatives assumes a level of new development that almost certainly exceed what will actually occur: the description of alternatives in Table 3 through 6 is very conservative (i.e., formulated so as not to underestimate potential impacts) in this respect. For that reason, the actual cumulative effect of Downtown development will be less significant and may occur at a slower rate than would seem to be the case at first glance.

In addition to cumulative changes in the study area, it is possible that land use changes in other Berkeley neighborhoods or commercial districts would occur as a result of the *Plan*. Limiting retail outlets that draw from a regional market to the Downtown would limit their location elsewhere, such as Elmwood, north Shattuck Avenue, West Berkeley or Rockridge.

The subtle cumulative shift in the Downtown land use pattern that the *Berkeley Downtown Plan* would encourage is one which has been subject to substantial community input during the planning process and would not in and of itself be a significant impact. Examples of mitigatory programs that are integral to the *Plan* itself, serving as built-in measures to reduce otherwise significant impacts to acceptable levels, include the growth management program and the various mitigation fee programs.

New projects on the UC campus that are either approved or proposed but not approved (adding to somewhere around 3.0 to 3.5 million square feet of built space) represent a volume of development that is several times as large as the net Downtown area growth, even under the conservative projections used herein. The UC projects have been accounted for in the cumulative analysis of this EIR. However, since in the aggregate they represent a "project" that is also subject to CEQA (with the EIR currently under preparation), it would be reasonable to expect cumulative and growth-inducing impacts of UC projects to be examined in even greater detail in that document.

The potential cumulative socioeconomic impacts depend greatly on the effectiveness of the *Plan's* various programs aimed at capturing the positive benefits of new development for local residents and forestalling adverse effects during the transition. If the policies and programs like provision of incubator space for startup businesses, the City's first source hiring program, the housing and childcare mitigation program and the various University of California-related programs are not assiduously pursued and successfully implemented, then the result over the long-run could be displacement and a style of gentrification that might channel the benefits of the *Plan* to other than current residents, employees and users of the Downtown. Even with the incorporated mitigation programs the potential exists for Berkeley residents and residents of other nearby communities to experience increased pressure on the housing market if commercial activity Downtown is not balanced with production of new dwelling units.

Cumulative traffic impacts (prior to mitigation) would cause unacceptable overall levels of service at a couple of intersections under the Maximum Bonus Alternative. Individual movements at selected intersections would operate at unacceptable levels under all four alternatives. With implementation of recommended mitigation measures, only one movement (Martin Luther King Jr. Way/University Avenue, NB left turn) would remain at an LOS below D.



Cumulative development would cause additional congestion on the regional corridors leading into Berkeley. For those corridors that are presently nearing, or already at, capacity, the peak period of congestion would be extended.

The air quality and noise effects of cumulative development are fully analyzed in those sections of Chapter IV.

## GROWTH INDUCING IMPACTS

The Berkeley Downtown Plan does not directly induce growth in the community. However, by changing land use designations, increasing or decreasing the development allowed on individual parcels, and changing the parking requirements for development, the proposed plan encourages certain types of growth that the planning process has deemed desirable for the community and regulates more closely other types that are regarded as less appropriate. Depending on the scale and rate of growth in the Downtown study area, supplemental growth may also be sparked in other areas of the City of Berkeley.

The four alternatives examined in this EIR would allow additional development beyond the existing conditions described in Chapter III (p. 33) on 24 separate parcels that have been determined to be of a size and of an existing level of development that makes them likely candidates for more intense future development. The total buildout levels of development on these 24 parcels have been projected (and analyzed in this EIR) as follows:

**No Action Alternative** ■ 1.3 million square feet of leasable space and 2,688 parking spaces;

**Downtown Plan - Base Alternative** ■ 1.5 million square feet of leasable space and 649 parking spaces (with in-lieu fees paid for an additional 1,040 spaces);

**Downtown Plan - Maximum Bonus Alternative** ■ 1.7 million square feet of leasable space and 870 parking spaces (with in-lieu fees paid for an additional 647 spaces);

**Low Intensity Development Alternative** ■ 1.0 million square feet of leasable space and 794 parking spaces.

Each of these Alternatives would represent a substantial level of new growth when compared to the base conditions summarized in Chapter III (defined as the No Project Alternative).

When compared to Alternative 1, the No Action Alternative, which represents the potential future conditions under existing regulations, both of the two *Plan*-based alternatives could lead to greater levels of development; only the Low Intensity Development Alternative would actually inhibit growth within the study area, compared to the likely future without the *Plan*'s regulatory revisions.

The new office and housing development in the Downtown could also induce additional retail and services growth in other areas of Berkeley. However, the emphasis in the *Plan* itself on growth in retail use and cultural and entertainment activities, suggests that the linkage of these complementary land uses may be at least partially balanced within the Downtown. Just how balanced or internally sustaining are the alternative office/retail/residential ratios will determine whether additional stimulation of growth will occur, beyond the levels projected in Tables 3 - 6 above. Given the heavy emphasis on retail uses and incentives for their development, the most likely scenario would be that some amount of retail space otherwise destined for other neighborhoods in Berkeley will locate Downtown.

Other growth-inducing impacts include the periodic increase in construction employment, increase in personal income to local residents and increase in retail sales (and its tax revenues).

## MITIGATION MEASURES

The *Berkeley Downtown Plan* is, in itself, a response to cumulative conditions that have begun to be experienced in the study area. It includes several policies and programs to address the levels of development allowed or encouraged under its regulations and incentives. These mitigatory elements include the traffic level of service (LOS) standard, the various mitigation fee programs (transportation, housing and childcare), the growth management program and the intent expressed throughout the *Plan* that the City work closely with the University of California so that campus growth not adversely effect the development of the Downtown and the overall community.

In addition, outside of the *Downtown Plan* process, officials of the City and the University have been meeting in attempts to communicate their respective intentions and needs.

## CHAPTER VI

### SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

#### Introduction

This program EIR recommends mitigation measures for more than fifty potential impacts that could arise as a result of the implementation of the *Berkeley Downtown Plan*.

#### Mitigable Versus Unavoidable Impacts

Throughout this EIR a three-part categorization system has been used to define impacts in terms of their level of significance:

- [⊙] indicates an impact that would occur, but is not substantial enough to reach the threshold of significance as defined under the California Environmental Quality Act (CEQA).
- [⊙] indicates that a significant adverse impact could occur, but that the full implementation of recommended mitigation measures would reduce the effects to a level of insignificance.
- [⊗] indicates an adverse impact that would be both significant, and unavoidable in that it would not be subject to amelioration through the application of mitigation measures.

Unavoidable effects of the proposed project would be any consequences of *Plan* implementation that would add significantly to adverse environmental conditions in the impact area or to the risk of adverse environmental impacts. As illustrated throughout this EIR, the *Plan* is designed to preserve desirable characteristics of the Downtown environment - physical, cultural, social and economic - and to improve on other features that have fallen into disrepair or have not been cultivated to their fullest potential. It also specifically incorporates a variety of programs to serve as mitigations for potential impacts. When combined with the mitigation measures recommended by this EIR, it may be concluded that there are no significant unavoidable impacts of the adoption of the *Berkeley Downtown Plan*.

#### Review of Subsequent Individual Development Projects

It is important to remember that proposals for specific new development within the study area would be subject to review under CEQA, and that additional mitigation measures may be required of those projects.





## CHAPTER VII

### THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

As a policy document intended to guide new development and adaptive reuse of existing development for 20 years, the *Berkeley Downtown Plan* seeks to maintain and enhance that environment during the course of its tenure. Furthermore, just as the circulation network, structures and urban systems built Downtown as long as 50 to 100 years ago still influence the Downtown today, the development allowed under this proposed plan will likely affect the study area for many years beyond the plan's official life.

The land use and other changes in the Downtown that will be permitted under the *Plan* are the short term uses of the environment that must be consistent with the goals and objectives of the *Plan*. If they are consistent with the *Plan*, they will therefore be consistent with a long-term view of the environment. The specific short-term versus long-term relationship that occurs within the context of the *Plan* for each project-specific change, will be addressed in its own environmental impact review process for that project-specific change.

On a more conceptual level, the *Plan* outlines several themes or directions for the future of Downtown Berkeley, which have varying implications for its short-term versus long-term productivity.

- ☐ The uncovering of Strawberry Creek holds the potential to increase the long-term recreational and aesthetic setting of the Downtown.
- ☐ To the extent that the *Plan* encourages more complete utilization of available parcels in the Downtown, located as it is in an area that is very well-served by local and regional public transit, the long-term transportation goals of the City would be served. Of course, this potential benefit has an analogous adverse impact in the case of parcels in the Downtown in which development potential is less after adoption of the new regulations and incentives set forth in the *Plan*, than at present under the existing C-2 zoning.
- ☐ Encouraging greater levels of cultural and entertainment activity in the Downtown would represent a more efficient use of even existing facilities.
- ☐ Linking new development more explicitly with the levels of service provided by local public services and infrastructure through the proposed growth management plan and through the recommended mitigation programs is a way of insuring that the long-term condition of sewers, roads, parking facilities and recreation areas and provision of services will be maintained and that Berkeley does not succumb to the temptation to postpone these costs into the future.
- ☐ To the extent that additional housing in the Downtown is encouraged by elements of the *Plan*, a more desirable long-term mix of land uses in this part of Berkeley would result.

- Concentrating new regional serving retail outlets in the Downtown instead of in other commercial neighborhoods elsewhere in Berkeley would also encourage efficient provision and use of transit facilities.
- One potential adverse impact on the long-term productivity of the Downtown as a commercial center involves the adoption of the new parking standards and whether or not developers would be willing to build without being able to provide more than the minimum level of parking.

## **CHAPTER VIII**

### **SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS OF THE PROJECT**

While none of the *Plan's* effects would be totally irreversible, the allowable levels of growth under any of the four alternatives could lead to very long term changes in the area's visual quality, air quality, noise environment, exposure to seismic hazards and water quality.



## CHAPTER IX

### SOURCES

#### EIR CONTRIBUTORS

##### City of Berkeley (Lead Agency)

2180 Milvia Street - 2nd Floor

Berkeley, CA 94704

Coordinator: Ruth Grimes, Planning and Community Development Department

Contributor: Lois Jones, Planning and Community Development Department

Gil Kelley, Acting Planning Administrator

##### EIR Consultant

Mundie & Associates

Consultants in Land Use and Economics

4902 California Street

San Francisco, CA 94118

Coordinator: David R. Clore, Senior Associate

Contributors: Roberta M. Mundie, Principal

Phyllis A. Potter, Associate

##### Technical Consultants to the EIR Consultant

Urban Design; Air Quality; Noise; Hazardous Wastes;  
Soils and Seismicity; and Water Quality:

Engineering-Science Inc.

600 Bancroft Way

Berkeley, CA 94704

Coordinators: Amy Skewes-Cox and Dick Bailey

Contributors: Paul Bertucci, Dan McCullar, Rick Makdesi,

Mary McKinnon, Carrie Badgett-West

Traffic, Circulation, Parking and Transit:

Barton-Aschman Associates, Inc.

622 Bancroft Way

Berkeley, CA 94404

Coordinator: Jean Follette

Contributor: Robert Rees

Graphics:

The Graphics Staff

1801 San Antonio Avenue

Berkeley, CA 94705

Coordinator: Lynda Wagstaff

## PERSONS AND ORGANIZATIONS CONTACTED

Hank Borders  
Police Department  
City of Berkeley

Jim Brunetti  
Fire Department  
City of Berkeley

Judy Chess  
Campus Planning Office  
University of California, Berkeley

Chuck De Leuw  
Department of Public Works  
City of Berkeley

Harvey Helfand  
Campus Planning Office  
University of California, Berkeley

Norma Hennesey  
Planning and Community Development  
City of Berkeley

Ray Hiatt  
Fire Department  
City of Berkeley

John Houlihan  
East Bay Municipal  
Utilities District

Britt Johnson  
Department of Health and  
Human Services  
City of Berkeley

Phil Kamlarz  
Assistant City Manager  
City of Berkeley

Bill Lambert  
Office of Economic Development  
City of Berkeley

Brian Lee  
Department of Public Works  
City of Berkeley

William Liskamm  
Campus Planning Office  
University of California, Berkeley

Herb Lotter  
Senior Civil Engineer  
City of Berkeley

Marjorie Macris  
Planning Administrator  
City of Berkeley

Neil Mayer  
Office of Economic Development  
City of Berkeley

Cornelius Moore  
Refuse Collection Division  
City of Berkeley

Patrick O'Connell  
Auditor-Controller  
County of Alameda

Dale Sanders  
Campus Planning Office  
University of California, Berkeley

Sylvia Toth  
Planning and Community Development  
City of Berkeley

Libby Tyler  
Planning and Community Development  
City of Berkeley

Dorothy Walker  
Campus Planning Office  
University of California, Berkeley

## SELECTIVE BIBLIOGRAPHY

BART. *BART Quarterly Performance Report: July - September 1988.*

\_\_\_\_\_. *A Plan for Progress: 1988 BART Five Year Plan*, September 1988.

Bay Area Air Quality Management District (BAAQMD). *Air Quality Impact Assessment Guidelines for Projects and Plans (Draft)*, April 1985.

Berkeley, City of. *Downtown Berkeley, Phase 1 Report*. n.d.

\_\_\_\_\_. *Downtown Berkeley, Phase 2 Report: A Framework for the Berkeley Downtown Plan*. September 1986.

\_\_\_\_\_. *Berkeley Chamber of Commerce Survey of Downtown Employees*, 1987.

\_\_\_\_\_. *Berkeley Downtown Plan, Working Document*. September 1987.

\_\_\_\_\_. *Berkeley Downtown Plan, Draft*. February 1988.

\_\_\_\_\_. *Berkeley Master Plan*, 1977.

\_\_\_\_\_. *Memorandum to the Mayor and City Council Regarding the Residential Permit Parking Program DFEIR and Proposed Program Changes, Fee Structure and Implementation*, September 1988.

\_\_\_\_\_. *Berkeley Noise Ordinance*, 1982.

\_\_\_\_\_. *Berkeley Zoning Ordinance*, 1988.

\_\_\_\_\_. *Downtown Business Locational Factors*, prepared by the Office of Economic Development and Planning and Community Development Department, November 1987.

\_\_\_\_\_. *Downtown Plan Working Document - Economic Information*, prepared by the Office of Economic Development and Planning and Community Development Department. September 1987.

\_\_\_\_\_. *Draft Environmental Impact Report for the Proposed 2161 Allston Way Office Building*, prepared by Planning Analysis & Development. State Clearinghouse # 87042126. June 1988.

\_\_\_\_\_. *Final Focused Environmental Impact Report for the Proposed Courtney Building*, prepared by Wagstaff and Brady, Urban and Environmental Planners, March 1986.

\_\_\_\_\_. *Economic Development Plan and Environmental Impact Report*, November 1980.

\_\_\_\_\_. *The West Berkeley Transportation Report: An Assessment of Transportation Conditions*, October 1987.

\_\_\_\_\_. *1988-89 Proposed Budget Summary*, May 2, 1988.



California, State of, Department of Finance. *Population Estimates of California Cities and Counties, January 1, 1987 to January 1, 1988*. Report 88 E-1. May 1, 1988.

\_\_\_\_\_. Department of Water Resources. *Measuring Economic Impacts: The Application of Input-Output Analysis to California Water Resources Problems*, Bulletin 210, March 1980.

\_\_\_\_\_. Division of Mines and Geology. *Fault Map of California, Geologic Data Series, Map No. 1, Scale 1:750,000*.

\_\_\_\_\_. Office of Planning and Research. *CEQA: The California Environmental Quality Act, Law and Guidelines*, January 1986.

\_\_\_\_\_. Office of Planning and Research. *Economic Practices Manual, Revised Edition*, April 1984.

Cambridge Systematics. *Conditions Assessment and Strategies: Downtown Transportation Study*, August 1986.

\_\_\_\_\_. *Assessment of Land Use Scenarios and Transportation Strategies: Downtown Transportation Study*, November 1986.

\_\_\_\_\_. *Implementation Plan: Downtown Transportation Study*, March 1987.

Charbonneau, R.B. *Strawberry Creek Management Plan*, Professional Report, Department of City and Regional Planning, U.C. Berkeley, Berkeley, California. 1988.

Engineering-Science, Inc. *Supplemental Environmental Impact Report, North Richmond Bypass*, 1985.

ESA. *City of Berkeley Residential Permit Parking Program Draft Final EIR*, September 1988.

Helley, E.J. and Lojoie. *Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning*, U.S. Geological Survey, Professional Paper No. 943. 1979.

Lennert and Associates. *Storm Drainage at the University of California*, University of California Department of Facilities Management. 1972.

Mundie & Associates. *Draft Environmental Impact Report on the Aquatic Park Center Project (Durkee Site)*. November 1986.

Perkins, J. *A Guide to ABAG's Earthquake Mapping Capabilities*, Association of Bay Area Governments, Oakland, California. 1983.

Planning Analysis & Development. *Proposed 2161 Allston Way Office Building, Draft Environmental Impact Report*. State Clearinghouse #87042126. June 1988.

Radbruch, D.H. *Areal and Engineering Geology of the Oakland West Quadrangle*, California, U.S. Geological Survey, Miscellaneous Geologic Investigations, Map I-239. 1957.

Sanborn Map Company. *Insurance Maps of Berkeley, California, V.1. 1890, 1894, 1928, 1950; V.2, 1929, 1950*.

University of California at Berkeley. *Foothill Student Housing Project, Draft Environmental Impact Report*. State Clearinghouse # 87070713. November 1987.

\_\_\_\_\_. *Foothill Student Housing Project, Final Environmental Impact Report: Volume II. Summary and Comments*. State Clearinghouse # 87070713. November 1987.

\_\_\_\_\_. *Foothill Student Housing Project, Final Environmental Impact Report: Volume III. Mitigation and Responses*. State Clearinghouse # 87070713. November 1987.

University of California, Cooperative Extension. *Estimating Economic Impacts in California: The San Francisco Bay Area Input-Output Model*, March 1983.

U.S. Army Construction Engineering Research Laboratory. *Construction Site Noise Specification and Control, Report N-36*, 1978.

U.S. Bureau of the Census. *Journey to Work*. 1980.

U.S. Department of Housing and Urban Development. *Flood Insurance Rate Map*, City of Berkeley, Federal Insurance Administration. 1978.

U.S. Department of Transportation, Federal Highway Administration. *FHWA Highway Traffic Noise Prediction Model, Report FHWA-RD-77-108*, 1978.

\_\_\_\_\_. *Federal Aided Program Manual, Volume 7, Environment, Chapter 7, Environment, Section 3, Procedures for Abatement of Highway Traffic Noise and Construction Noise (FHPM-7-7-3)*, 1982.

Yould, T.L. *Liquefaction Hazards in the Eastern San Francisco Bay Area from Proceedings of Conference on Earthquake Hazards in the Eastern San Francisco Bay Area*, California Division of Mines and Geology, Special Publication, No. 62.





# CHAPTER X

## INDEX

- A-weighted noise scale, 173
- AC Transit, 11, 13, 49, 98, 137, 139, 145, 216, 221, 224
- Academic, 67, 227, 228, 229, 230
- Accessibility, 139, 141, 144
- Accidents, 132
- Acerifolia, 102
- Acoustical, 174, 178
- Acoustical noise studies, 15
- Addison Street, 33, 34, 35, 37, 39, 51, 57, 68, 81, 84, 88, 90, 94, 102, 110, 112, 113, 115, 116, 117, 119, 124, 126, 131, 150, 159, 171, 185, 198, 232, 233
- Addison Street View Corridor 90, 110, 124
- Aeration, 167, 203
- Aesthetic, 61, 203, 239
- Affordable, 51
- Age and racial makeup of downtown, 65
- Air quality, 2, 14, 165, 167, 168, 170
- Alameda County, 44, 49, 64
- Alameda County Courthouse, 50
- Albany, 132, 137, 139, 231
- Allston Way, 33, 34, 35, 37, 39, 81, 92, 93, 94, 98, 115, 124, 126, 131, 137, 149, 151, 163, 171, 174, 198, 228
- Alluvial materials, 194
- Alquist-Priolo, 16, 194
- Alquist-Priolo designated zones, 194
- Ambient noise levels, 14, 15, 165, 166, 168, 170, 171, 173, 174, 175, 178
- Ambulances, 206
- American Language Academy, 171
- Antioch, 192
- Apartments, 44, 45, 88, 174
- Appendix, 1, 2, 4, 5, 7, 41, 125, 173, 208, 212
- Applicants, 78, 103, 121, 221
- Application, 31, 79, 110, 147, 178, 219, 237
- Appropriations, 218
- Aquatic, 152, 199
- Architects, 32, 81, 104
- Architectural, 21, 79, 81, 84, 92, 98, 103, 110, 123
- Armstrong College, 171
- Art Deco, 84
- Arterial, 50, 127, 151
- Asbestos-containing materials (ACM), 168, 170
- Ashby Avenue, 127, 151, 152
- Asphalt, 202
- Assessed valuation, 215, 216
- Assessment, 3, 123, 127, 135, 162, 170, 188, 220
- Assessment district, 205
- Assessment of existing conditions and strategies, 41
- Assessment of land use scenarios and strategies, 41
- Association of Bay Area Governments (ABAG), 16, 49, 64, 66, 194
- Assumptions, 7, 28, 29, 32, 55, 66, 68, 70, 72, 74, 146, 147, 153, 155, 161, 213
- Authors, 207, 209
- Auto repair shops, 188
- Auto-oriented businesses, 54
- Auto-related, 8, 15, 21, 43, 44, 45, 50, 55, 63, 125, 180
- Automated bank teller machines, 140
- Automobile, 127, 139, 165, 167, 168, 170, 179, 183
- Automobile accidents, 204
- Automobiles, 167, 205
- Backhoes, 176
- Bacteria, 17, 199, 201, 203
- Bacterial contamination, 17, 203
- Balconies, 79
- Bancroft Way, 44, 81, 115, 127, 128, 131, 185, 231
- Bank of America, 98, 126
- BART Station, 21, 50, 98, 138, 139, 204
- Barton-Aschman, 127, 130, 131, 143, 146, 148, 150, 152, 153, 154, 156, 157
- Basic industries, 70
- Bay, 7, 14, 16, 60, 65, 66, 69, 71, 88, 92, 94, 110, 113, 138, 165, 167, 183, 189, 194, 196, 209, 227
- Bay Area Air Quality Management District (BAAQMD), 14, 49, 165, 167, 168, 169, 216, 224,
- Bay Area Rapid Transit District (BART), 11, 13, 49, 137, 138, 139, 152, 153, 154, 158, 216, 220, 224, 220
- Benches, 98, 102, 125, 220, 221
- Benefit assessment district, 219, 220
- Berkeley Architectural Heritage Association (BAHA), 79, 121, 218
- Berkeley Citizens for Creek Restoration, 203
- Berkeley Community Theatre, 50
- Berkeley High School, 50, 173
- Berkeley Hills, 53, 88, 92, 94, 102, 113, 115, 117, 119, 189
- Berkeley Master Plan, 49
- Berkeley TRiP, 137, 139
- Berkeley Unified School District, 216, 220, 224
- Berkeley-Oakland Hills, 16
- Benning, 197
- Bicycle, 14, 139, 140, 141, 156, 158, 167, 171
- Bicycle parking facilities, 140
- Bicycle racks, 103
- Bike, 12, 26, 132, 141, 147, 156, 157, 158
- Bike lockers, 171
- Bonita, 81, 88, 173, 174
- Bonus, 7, 12, 13, 14, 18, 19, 27, 31, 32, 37, 40, 55, 60, 118, 147, 149, 151, 152, 153, 154, 155, 156, 157, 158, 160, 161, 163, 169, 176, 202, 205, 208, 212, 223, 225, 234, 235
- Bonus-based, 31
- Borings, 183
- Budget, 214, 215, 217, 221
- Buffer, 21, 31, 40, 51, 53, 54, 55, 94, 115, 117, 119, 121, 122, 125
- Buffers, 33, 50
- Building heights, 27, 79, 88, 110, 117
- Building orientation, 58
- Buildout, 2, 15, 19, 27, 34, 35, 37, 39, 60, 213, 223, 235
- Bulk, 94, 115, 122, 211
- Bulldozers, 176
- Bus, 11, 50, 98, 132, 135, 137, 138, 139, 141, 158, 221, 222
- Buses, 132, 140, 171
- Business license fee, 213, 217, 224, 225
- California Air Resources Board (CARB), 165, 166
- California Department of Health Services (DOHS), 49, 167
- California Department of Mines and Geology, 194
- California Department of Transportation (CalTrans), 49, 174
- California Environmental Quality Act (CEQA), 1, 31, 50, 214, 227
- CALINE, 165, 168
- Campanile, 171
- Campus, 17, 21, 49, 50, 66, 67, 88, 94, 99, 109, 115, 135, 138, 198, 199, 201, 203, 214, 227, 228, 229, 230, 231, 232, 236
- Campus Planning Office, 51, 66, 233
- Campus shuttle, 137, 138
- Carbon monoxide (CO), 14, 165, 167, 168, 169
- Carcinogenic, 170
- Carpooling, 138, 171
- Carpools, 139, 143, 158
- Cars, 129, 134, 171, 181, 182

CDBG, 51  
 Census, 9, 65, 66, 67  
 Center Street Design Plan, 218  
 CEQA, 1, 2, 4, 9, 25, 58, 68, 70, 71, 204, 227, 234, 237  
 CEQA Guidelines, 1, 2, 3, 4, 5  
 El Cerrito, 94, 137, 139  
 Chamber of Commerce, 220  
 Chemical oxygen demand, 199  
 Childcare, 10, 68, 70, 72, 73, 75, 76, 77, 236  
 Childcare services, 9, 73, 75, 76, 77  
 Chromium, 199  
 Cigarette taxes, 217  
 Circulation, 1, 12, 32, 41, 43, 53, 127, 128, 140, 141, 142, 145, 159, 221, 239  
 City Auditor, 215  
 City Clerk, 215  
 City Council, 5, 32, 215  
 City Hall, 92, 201  
 City landmarks, 10, 21  
 City Manager, 215, 217  
 City of Berkeley Noise Ordinance, 175  
 City of Oakland, 44  
 Citywide employment, 63  
 Citywide employment trends, 64  
 Citywide housing stock, 67  
 Citywide population, 65  
 Civic Center Building, 50  
 Civic Center Park, 53  
 Clerical, 73, 74, 75, 76  
 Climate, 66, 165  
 CNEL, 174, 178  
 Coastal fog, 165  
 Coliform bacteria, 17, 199  
 Commercial, 8, 18, 31, 44, 45, 47, 49, 50, 53, 54, 55, 57, 58, 59, 60, 61, 64, 67, 72, 78, 84, 92, 103, 134, 155, 171, 173, 174, 175, 179, 205, 211, 212, 234, 240  
 Commercial businesses, 43, 44  
 Commercial vacancy rates, 64  
 Common Framework, 41  
 Commute, 11, 132, 137, 147  
 Commuters, 135, 139  
 Compatibility, 8, 60, 103, 110, 113, 117, 119  
 Conflicts, 11, 14, 139, 141, 167  
 Congestion, 14, 26, 53, 127, 130, 141, 159, 170, 204, 227, 235  
 Conservation, 2, 51, 207  
 Conservative, 32, 69, 144, 215, 226, 234  
 Conserving, 208, 209  
 Consistency, 11, 140  
 Consistent, 1, 25, 28, 43, 53, 54, 59, 61, 69, 70, 102, 122, 142, 207, 239  
 Constructed, 18, 44, 59, 63, 73, 84, 102, 110, 113, 115, 155, 168, 178, 197, 206, 226  
 Constructing, 27, 66, 145, 163, 227  
 Construction, 9, 14, 15, 16, 18, 28, 32, 44, 50, 51, 54, 58, 59, 61, 68, 70, 71, 72, 73, 74, 78, 79, 103, 113, 115, 121, 144, 145, 158, 160, 161, 162, 168, 170, 175, 176, 178, 188, 197, 202, 205, 206, 207, 208, 212, 214, 219, 220, 221, 222, 225, 226, 235  
 Construction equipment, 178  
 Construction jobs, 71, 72  
 Construction period noises, 174  
 Consultant, 12, 31, 32, 41, 125, 204, 227, 233  
 Consultants, 3, 4, 146, 148  
 Contaminants, 179, 183, 199  
 Contaminated, 15, 167, 168, 183, 185, 188  
 Contaminated groundwater, 15, 183, 188  
 Contaminated soils, 14, 167, 168, 185  
 Contamination, 15, 16, 179, 183, 185, 188, 198, 199, 203  
 Contamination sites, 168  
 Contributing Structures, 79, 110, 117, 119  
 Covenant, 219  
 Cooperatives, 67  
 Copper, 199  
 Cordon, 137, 148, 154  
 Core, 13, 21, 28, 31, 33, 40, 50, 53, 54, 55, 57, 58, 88, 113, 115, 117, 119, 121, 137, 142, 144, 155, 158, 159, 162, 170, 212, 213  
 Cornices, 79, 84, 123  
 Corridor, 11, 21, 50, 84, 88, 91, 92, 93, 94, 95, 96, 102, 109, 110, 113, 115, 117, 121, 124, 126, 151, 152, 153  
 Corridors, 10, 12, 32, 84, 89, 90, 94, 102, 104, 110, 112, 115, 117, 119, 122, 123, 124, 125, 127, 148, 151, 164, 235  
 Cost, 14, 19, 51, 66, 160, 161, 162, 203, 205, 211, 213, 214, 215, 217, 218, 219, 220, 221, 222, 223, 226  
 Costs, 1, 17, 19, 49, 66, 68, 145, 161, 162, 201, 204, 207, 213, 214, 215, 218, 219, 220, 221, 222, 223, 225, 226, 239  
 Counties, 65, 127  
 County Courthouse, 148  
 County Flood Control District, 216, 224  
 County of Alameda, General Fund, 216, 224  
 County Superintendent of Schools, 216  
 Couplet, 127, 159  
 Court, 25, 233  
 Courthouse, 44, 232  
 Courtney Building, 152  
 Cowell, 229, 232  
 Cragmont Park, 94  
 Crayfish, 199  
 Creek, 17, 125, 126, 192, 198, 199, 201, 202, 203, 219, 222, 226  
 Crime, 204, 205  
 Criminal, 205  
 Cross-referencing, 4  
 Crosswalks, 140  
 Cultural, 1, 7, 21, 26, 27, 43, 49, 50, 53, 55, 57, 60, 69, 201, 205, 235, 237, 239  
 Culvert, 17, 198, 199, 201, 202, 203  
 Cumulative, 3, 4, 8, 12, 49, 146, 148, 150, 151, 152, 153, 227, 229, 230, 231, 232, 233, 234, 235, 236  
 Cumulative and growth-inducing effects, 59  
 Cumulative Development List, 228  
 Curbs, 135, 140, 155, 156, 163, 220  
 Customers, 133, 144, 161  
 Decisionmakers, 26, 32, 58, 62, 159, 214, 226  
 Deficit, 161, 226  
 Deficits, 156, 217  
 Demolition, 14, 21, 26, 28, 54, 58, 79, 121, 168, 170, 175  
 Demolition of existing structures, 58  
 Densities, 8, 28, 69  
 Density, 60, 66, 117, 154, 156, 188  
 Department of Engineering, 202  
 Department of Health Services (DOHS), 70, 71  
 Design, 1, 7, 8, 10, 15, 17, 21, 32, 41, 42, 43, 44, 51, 53, 58, 61, 79, 84, 102, 103, 104, 105, 106, 107, 108, 110, 113, 117, 119, 121, 122, 123, 124, 125, 126, 135, 142, 159, 160, 174, 178, 201, 203, 205, 206, 207, 214, 218, 219, 220, 222, 226  
 Design Review Committee, 51, 103  
 Design review guidelines, 57, 121, 122, 123  
 Design Review Ordinance, 51, 103, 121, 122, 123  
 Designers, 104, 122  
 Developers, 32, 59, 61, 63, 66, 67, 71, 78, 122, 125, 141, 144, 153, 162, 207, 208, 219, 240  
 Development Impact Assessment (DIA), 147  
 Dewatering, 202  
 DIA model, 147  
 Dial-a-ride services, 138  
 Dickenson Warren Business College, 171  
 Diesel, 170, 185  
 Disabled, 127, 139, 141, 142, 159, 160  
 Disasters, 207  
 Disinvestment, 59  
 Displacement, 59, 61, 234  
 Disposal, 18, 179, 183, 214  
 Disrepair, 237  
 Dissolved oxygen, 199  
 Documentation, 67, 179  
 Documents, 2, 3, 4, 26, 41, 49, 60, 63, 221, 222  
 Doors, 84, 174, 178, 205

Doughnut, 135  
 Downgradient, 183  
 Downtown Berkeley population, 65  
 Downtown Plan Committee, 41, 43  
 Drainage, 17, 199  
 Drains, 16, 17, 196, 197, 198, 201, 202  
 Dump, 176  
 Durant Avenue, 33, 34, 35, 37, 39, 68, 81, 94, 102, 127, 128, 131, 132, 149, 150, 151, 155, 158, 171, 174  
 Dust, 168, 169  
 Dust emissions, 170  
 Dwight Way, 127, 137, 154  
 Dwinelle Hall, 231  
 Dynamic loading, 194  
  
 Earth Metrics, 233  
 Earthmoving equipment, 176  
 Earthquakes, 16, 189, 192, 194, 196, 197  
 Easements, 219  
 East Bay Municipal Utility District (EBMUD), 18, 44, 207, 208, 209, 216, 224  
 East Bay Regional Park District, 216, 224  
 Economic, 1, 3, 43, 59, 60, 63, 64, 65, 66, 67, 68, 71, 72, 73, 74, 75, 76, 142, 144, 214, 220, 227, 237  
 Economy, 7, 9, 27, 63, 70, 71, 72, 78, 227  
 Educational, 15, 55, 65, 66  
 Effluent, 199  
 Elderly, 139  
 Elevation, 189, 201  
 Elevator, 205  
 Elmwood, 211, 234  
 Emergency, 18, 175, 206  
 Emeryville, 137, 139  
 Emissions, 14, 165, 167, 168, 169, 170, 171  
 Employee, 67, 69, 135, 153  
 Employees, 8, 11, 60, 63, 64, 65, 67, 68, 69, 71, 74, 75, 76, 78, 133, 139, 143, 152, 158, 171, 174, 215, 223, 234  
 Employers, 65, 71, 78, 143, 171  
 Employment, 9, 10, 17, 19, 60, 63, 64, 65, 67, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 202, 235  
 Employment densities, 69  
 Employment multipliers, 70  
 Energy, 43, 173, 174, 176  
 Energy equivalent sound level (Leq), 173  
 Engineering, 145, 176, 189, 194, 197, 198, 214, 219  
 Engineering-Science, 167, 169, 174, 182, 185, 192  
 Entertainment, 7, 21, 26, 44, 45, 57, 60, 69, 235, 239  
 EPA, 167  
 Epicenter, 194  
 ESA, 135, 151  
 Etcheverry Hall, 229  
 Evacuation, 206  
 Excavation, 14, 15, 16, 168, 170, 176, 188, 196, 197  
 Exceptions, 12, 14, 21, 27, 44, 58, 128, 165, 198  
 Exemptions, 13, 31, 63, 153, 155, 156, 158, 160, 161, 162, 164, 197  
 Exhaust, 165, 167, 170  
 Existing employment, 65  
 Exposure, 16, 17, 170, 196, 240  
  
 Facade Restoration Program, 218  
 Facades, 21, 84, 88, 102  
 Fast food establishments, 55  
 Faults, 16, 189, 192, 194  
 Feasibility Study to Uncover Strawberry Creek, 17, 201  
 Fecal coliform bacteria, 17, 199  
 Federal Highway Administration, 15, 174  
 Federal Insurance Administration, 202  
 Fee, 10, 19, 40, 67, 78, 122, 145, 158, 160, 161, 162, 209, 211, 214, 215, 217, 219, 225, 236  
 Fees, 31, 78, 126, 153, 162, 213, 214, 215, 217, 219, 221, 222, 225, 235  
 Filtration, 183  
 Finance Department, 215, 219  
 Financing, 14, 19, 27, 66, 144, 145, 162, 196, 222  
 Fire, 18, 43, 183, 206, 207, 208, 213, 215, 219  
 Fire Department, 206, 208, 219  
 Fire flow volume, 206  
 Fire hazards, 206  
 First Source Hiring Program, 78, 234  
 Fiscal, 7, 18, 19, 43, 51, 68, 204, 213, 214, 215, 217, 218, 221, 222, 223, 225, 226  
 Fish, 199  
 Flood, 198, 201, 202, 203  
 Flood control, 203  
 Flood Control Ordinance, 202  
 Flood hazard zone, 17  
 Flood Insurance Rate Map, 198  
 Flooding, 17, 198, 201  
 Floor area ratio (FAR), 28, 31, 50, 54, 55, 58, 59, 60, 76  
 Foundations, 189, 197  
 Fountains, 98, 102, 125  
 Fremont, 138, 153, 154  
 Frontages, 57, 92  
 Fuel, 179, 181, 185  
 Fuel oil tanks, 179  
 Fugitive dust, 14  
  
 Gann Appropriation Limitation (Proposition 4), 218  
 Garage, 31, 32, 81, 139, 149, 143, 145, 153, 155, 156, 162, 181, 182, 222, 231  
 Garbage, 125  
 Garbage receptacles, 10, 98  
 Gasoline, 179, 181, 185  
 Gasoline stations, 179  
 Gateway, 84, 92, 94, 113, 115  
 Gentrification, 234  
 Geology, 7, 16, 43, 189, 196, 234  
 Geotechnical, 16, 197  
 Golden Bear Building, 64, 84, 113, 221  
 Good Earth Restaurant, 171  
 Grading, 168  
 Grants, 145, 196, 218, 219, 220  
 Gravel, 189  
 Grease, 199  
 Great Western Building, 10, 50, 84, 88  
 Ground, 16, 17, 44, 53, 54, 55, 57, 79, 94, 98, 125, 173, 194, 196, 197, 201, 202, 203  
 Ground-floor, 121  
 Groundwater, 17, 179, 183, 185, 188, 198, 202  
 Groundwater contamination, 16  
 Growth, 8, 9, 10, 18, 19, 26, 28, 40, 41, 44, 58, 59, 60, 61, 65, 69, 70, 71, 72, 73, 74, 102, 141, 142, 146, 151, 155, 160, 206, 207, 208, 209, 213, 214, 217, 223, 226, 227, 234, 235, 236, 239, 240  
 Growth management program, 18, 142, 207, 208, 209, 211, 234  
 Growth-inducing, 3, 4, 8, 234, 235  
 Guidelines, 3, 14, 31, 103, 104, 110, 117, 119, 122, 123, 160, 165, 167, 169, 218  
  
 Habitat, 203  
 Handicapped, 134  
 Hayward, 16, 192, 194  
 Hayward Fault, 189  
 Hazard, 16, 194, 196, 198  
 Hazardous, 7, 8, 14, 15, 43, 49, 168, 170, 179, 181, 182, 183, 188, 198, 201, 234  
 Hazardous materials, 14, 15, 168, 170, 198  
 Hazards, 16, 17, 43, 188, 196, 201, 203, 240  
 Health, 17, 63, 170, 179, 183, 201, 203, 217, 231, 232  
 Hearing, 41, 173  
 Hearst, 137, 154, 183, 229  
 Heating, 15, 17, 165, 179, 185, 199  
 Height, 31, 41, 50, 54, 55, 58, 59, 60, 61, 76, 84, 92, 102, 104, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 122, 123, 124, 173, 201, 207  
 Height and bulk requirements, 124  
 Height limits, 39, 55, 60, 111, 112, 113, 114, 115, 116, 118, 119, 120, 122, 123, 124  
 Heights, 27, 55, 60, 63, 88, 110, 117, 119, 123, 124  
 Heritage, 21, 79, 81  
 High-rise, 18, 206  
 Highway, 174, 176



Hills, 10, 88, 92, 94, 110, 113, 119, 138, 165, 189  
 Hinks Department Store, 64, 81  
 Historic, 1, 8, 10, 16, 21, 26, 42, 43, 44, 50, 51, 52, 58, 60, 79, 80, 88, 92, 94, 103, 104, 105, 106, 107, 108, 110, 113, 117, 121, 122, 123, 183, 188, 192, 196, 197, 213, 215, 218, 219, 226  
 Historic Building Code, 16  
 Historic Design Review Committee, 51  
 Historic Overlay Zone, 10, 121, 123  
 Historic structures, 50, 79, 104, 110, 113, 117, 119, 121, 218  
 Holocene era, 194  
 Hospital, 232  
 Hotel, 44, 65, 66, 79, 81, 92, 171  
 Hotels, 15, 45, 65, 174, 219  
 Households, 9, 10, 51, 66, 67, 68, 69, 70, 73, 74, 75, 76, 77, 78  
 Housing, 3, 8, 9, 10, 21, 26, 31, 34, 35, 37, 39, 40, 44, 51, 53, 55, 57, 59, 60, 63, 64, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 198, 201, 214, 221, 222, 227, 229, 230, 234, 235, 236, 239  
 Housing and childcare mitigation program, 234  
 Housing mitigation fee, 68, 74  
 Hydrocarbons (HC), 14, 168, 169, 183  
 Hydrological, 198, 199, 202  
 Hydrology, 2, 7, 8, 17, 43, 49, 198, 201, 234  
  
 I-House, 230  
 Impact fees, 66  
 Impedance, 194  
 Implementation, 1, 2, 3, 9, 11, 13, 19, 25, 27, 31, 41, 53, 54, 58, 59, 63, 75, 78, 123, 135, 141, 142, 143, 144, 145, 151, 155, 158, 159, 163, 164, 176, 213, 214, 218, 221, 222, 227, 234, 237  
 In-lieu fee, 14, 31, 36, 37, 40, 122, 126, 143, 145, 153, 155, 156, 162, 235  
 In-migration, 74  
 Incentives, 7, 8, 27, 28, 41, 49, 54, 59, 60, 63, 68, 71, 72, 76, 78, 103, 139, 143, 196, 201, 214, 218, 226, 235, 236, 239  
 Inclusionary zoning, 8  
 Income, 9, 10, 51, 66, 67, 70, 73, 75, 76, 77, 78, 235  
 Incubator space, 10, 78, 234  
 Industrial, 15, 55, 63, 67, 175  
 Industries, 70, 72, 183  
 Industry, 70, 73, 74, 75, 76  
 Infill, 53, 164, 211, 213, 230  
 Infill development, 54, 209  
 Infiltrating, 202  
 Infiltration, 17, 209  
 Infiltration and inflow, 209  
 Inflation, 14, 145, 162, 217  
 Infrastructure, 12, 26, 27, 68, 140, 158, 164, 211, 214, 239  
 Inhalable particulates, 14, 165  
 Initial study, 7  
 Injuries, 197  
 Inspection, 18, 189, 219, 206  
 Insurance, 63, 64, 179, 198  
 Insurance Service Office (ISO), 206  
 Intersections, 11, 12, 14, 41, 94, 123, 128, 131, 132, 140, 149, 150, 151, 158, 159, 160, 164, 176, 220, 234  
 Invertebrates, 199  
  
 Jobholders, 63, 213  
 Jobs, 2, 9, 26, 63, 64, 65, 69, 70, 71, 72, 73, 74, 75, 76, 78, 227  
  
 Kensington, 137  
 Key System railroad, 44  
 Kittredge, 33, 34, 35, 37, 39, 81, 94, 102, 110, 113, 126, 131, 150, 155, 163, 171, 173, 174, 233  
 Kress, 81, 84, 88  
  
 Lab, 182, 228, 229, 232  
 Labor, 64, 69, 71  
 Labor force, 65  
 Lake, 125, 138, 154  
  
 Land use and planning, 8  
 Landfill, 211  
 Landmark, 79, 88, 109, 110, 113, 117, 119  
 Landmark Buildings, 79, 81, 88, 104, 110, 113, 117, 119, 123  
 Landmarks Preservation Commission, 51, 79, 104, 121, 219  
 Landmarks Preservation Ordinance, 51, 121  
 Landowners, 32, 59  
 Landscape, 10, 94, 98, 102, 126, 205, 208, 220  
 Landscaping, 26, 74, 84, 94, 115, 124, 178, 208  
 Lawrence Berkeley Labs (LBL), 50, 138, 146, 148  
 Leq, 174  
 Level of Service (LOS), 11, 13, 53, 130, 141, 160, 167  
 Level of service (LOS) standard D, 8, 141, 176  
 Libraries, 229  
 Library, 15, 81, 229  
 License, 64, 215, 217  
 Light, 94, 109, 110  
 Light and glare, 110  
 Lighting, 98, 102, 125  
 Lights, 110, 178, 214  
 Liquefaction, 16, 194, 196  
 Liquidambar, 102  
 Liriodendron, 88, 102  
 Litter, 17, 26, 201, 202  
 Long Range Development Plan (LRDP), 49, 227  
 Long-term, 26, 71, 135, 141, 162, 170, 175, 239, 240  
 LOS, 8, 11, 12, 13, 53, 63, 130, 131, 132, 141, 142, 149, 150, 151, 158, 159, 160, 163, 164, 167, 234, 236  
 Lot coverage, 58  
 Low-income, 139  
  
 Manufacturing, 55, 70  
 Maps, 48, 158, 179, 182  
 Marginal cost, 213  
 Marin Headlands, 88  
 Martin Luther King Jr. Park, 10  
 Mason-McDuffie, 81, 88  
 Massing, 110  
 Master Plan, 8, 26  
 Matrix, 4, 28, 109  
 McDonalds restaurant, 98  
 Median-strip, 94  
 Merrill-Lynch Building, 84  
 Meteorology, 165  
 Mid-block pedestrian pathways, 125, 140, 142, 159, 160  
 Mills Act, 219  
 Milvia Street, 33, 34, 35, 37, 39, 47, 68, 81, 88, 113, 115, 117, 124, 127, 128, 129, 131, 140, 149, 150, 163, 171, 173, 174, 198  
 Mission Revival architectural style, 79, 88  
 Mitigable, 63, 237  
 Mixed-use, 57, 226  
 Modal split, 132, 147  
 Mokelumne aqueducts, 207  
 Monitor, 17, 63, 161, 185, 203  
 Monitoring, 9, 14, 142, 164, 165, 183, 205, 234  
 Moped, 139, 140, 145  
 Motor vehicle in-lieu fees, 217  
 Motorcycles, 139, 140, 145, 158, 171  
 Motorists, 115, 130, 139  
 Multi-story, 202  
 Multi-tenant, 64  
 Multifamily, 147, 174  
 Multiplier effect, 71  
 Multipliers, 207  
  
 National Flood Insurance Program, 198  
 National Oceanic and Atmospheric Administration, 165  
 National Primary and Secondary Drinking Water Regulations, 199  
 National Register of Historic Places, 10, 21, 79  
 Neighborhood, 49, 53, 54, 103, 135, 171, 173, 204, 222, 230  
 Neighborhood commercial districts, 8, 53  
 Neighborhood commercial centers, 63

Neighborhoods, 4, 8, 11, 26, 50, 53, 60, 63, 103, 113,  
 119, 135, 139, 143, 158, 161, 211, 234, 235, 240  
 Neo-Classical, 79, 84  
 Net fiscal benefit, 69  
 New construction, 58  
 Newberry's, 81, 88  
 Newsracks, 10, 98, 101, 125, 140  
 Night-lighting, 220  
 Nitrogen, 14, 169, 199  
 Nitrogen oxides (NOx), 14, 168, 169  
 Noise, 2, 7, 8, 15, 43, 49, 125, 171, 172, 173, 174, 175,  
 176, 177, 178, 227, 235, 240  
 Noise barriers, 178  
 Noise-sensitive receptors, 171, 176  
 Notice of Completion, 4  
 Notice of Preparation (NOP), 1, 2, 4, 5  
  
 Oakland, 14, 64, 127, 132, 137, 139, 165, 166, 189, 194,  
 209  
 Occupational, 67, 69, 72, 73, 74, 75, 76  
 Occupations, 72, 73, 74, 75, 76  
 Office, 2, 3, 7, 8, 21, 44, 45, 51, 57, 58, 59, 60, 63,  
 64, 65, 66, 69, 70, 72, 73, 74, 75, 76, 77, 81, 98, 137,  
 139, 142, 146, 147, 156, 182, 205, 208, 212, 214, 224,  
 226, 227, 228, 229, 230, 232, 233, 235  
 Office of Auditor-Controller, County of Alameda, 216, 224  
 Office of Economic Development (OED), 51, 63, 66, 68, 69,  
 71, 73, 74, 78, 213, 220, 221  
 Offices, 43, 44, 50, 55, 74, 79, 204, 215  
 Old City Hall, 50  
 Open space, 53, 79, 104, 125  
 Ordinance, 1, 9, 12, 51, 53, 54, 55, 68, 103, 104, 122,  
 123, 125, 141, 142, 143, 144, 158, 160, 174, 175, 196,  
 198, 201, 207, 209, 218, 219, 221  
 Owner-occupied, 9, 67  
 Owners, 63, 216, 218, 220  
 Oxford Street, 21, 31, 33, 34, 35, 37, 39, 44, 50, 53, 54, 55,  
 57, 68, 81, 84, 92, 94, 96, 102, 109, 115, 116, 117, 119,  
 122, 123, 124, 127, 128, 129, 131, 132, 137, 149, 150,  
 151, 154, 159, 171, 174, 183, 185, 198, 199, 221, 228,  
 229, 230, 231, 233  
 Oxford House, 228  
 Oxford/Fulton Street corridor, 110, 113, 115, 117, 119,  
 124  
 Oxides, 14, 169  
 Ozone, 14, 165  
  
 Paratransit, 138  
 Parking, 11, 12, 13, 14, 17, 26, 27, 28, 31, 32, 34, 35,  
 37, 39, 40, 44, 45, 50, 53, 54, 55, 58, 60, 68, 72, 88,  
 92, 94, 98, 103, 104, 110, 115, 117, 119, 121, 122, 124,  
 127, 132, 133, 135, 137, 139, 140, 141, 143, 144, 145,  
 151, 153, 155, 156, 157, 158, 159, 161, 162, 163, 164,  
 170, 178, 182, 201, 202, 204, 205, 215, 221, 222, 226,  
 227, 228, 232, 235, 239, 240  
 Parking facilities, 8, 17, 53, 79, 133, 141, 143  
 Parking management plan, 13, 143, 144  
 Parking ratio, 13, 144, 145, 155, 161  
 Parking requirements, 7, 58, 63  
 Parking structures, 104, 126  
 Parking supply, 13  
 Parks, 126, 214  
 Parks and Recreation Commissions, 220  
 Parks and Recreation Department, 125  
 Particulates, 14, 165, 168, 169  
 Paving, 88, 92, 94, 98, 102, 121, 122, 220  
 Pedestrian activity, 57, 59  
 Pedestrian crossing signals, 11  
 Pedestrian environment, 102, 110, 113, 115, 119, 124, 125  
 Pedestrian-scale, 88, 102  
 Pedestrians, 10, 11, 14, 16, 17, 18, 26, 27, 29, 79, 84,  
 92, 98, 102, 103, 104, 110, 113, 115, 117,  
 119, 121, 123, 124, 125, 126, 127, 139, 140, 156, 167,  
 196, 197, 205, 220  
 Peralta Community College District, 216, 224  
 Performance, 25, 53, 63, 138, 161  
 Period Revival architectural style, 84  
 Permanent jobs, 72  
 Permits, 2, 3, 9, 55, 57, 58, 68, 79, 135, 151, 155, 161,  
 178  
 Phasing, 10, 155, 158, 163, 164  
 Phasing plan, 78  
 Pipelines, 183  
 Pittosporum, 94, 102  
 Planning and Community Development Department, 2, 4, 7,  
 63, 196, 218, 219, 221  
 Planning Commission, 5, 32, 41, 43  
 Plantings, 98, 102, 117, 122, 124, 220  
 Plaza, 204, 220  
 Pleasanton, 127  
 Police, 18, 204, 205, 213, 215, 219  
 Police Department, 204  
 Pollutants, 167, 170  
 Poplars, 98  
 Population, 9, 17, 18, 19, 26, 63, 65, 66, 69, 70, 71, 72,  
 73, 74, 75, 76, 77, 125, 202, 205, 215, 217, 224, 227  
 Professional, 32, 73, 74, 75, 76, 185, 189, 199  
 Programs, 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,  
 17, 18, 19, 27, 31, 32, 42, 43, 50, 51, 53, 54, 61, 63,  
 68, 78, 102, 123, 140, 141, 142, 143, 144, 145, 155, 158,  
 159, 167, 169, 188, 196, 201, 204, 205, 206, 207, 209,  
 211, 212, 213, 214, 215, 218, 222, 225, 226, 234, 236,  
 237, 239  
 Projecting childcare impacts, 70  
 Projecting gross employment, 69  
 Projecting housing impacts, 70  
 Projecting population, 69  
 Property tax, 213, 215, 216, 217, 225  
 Property transfer tax, 217  
 Public facilities and services, 18, 204  
 Public Safety Department, 215, 219, 221  
 Public Works Department, 125, 214, 219, 220  
  
 Recreation, 1, 43, 239  
 Recreational, 55, 219, 239  
 Recycling, 211, 212, 214  
 Redevelopment, 7, 28, 50, 59, 72, 167, 218  
 Reduced parking ratios, 13  
 Refuse Collection Division, 212  
 Regional, 1, 8, 12, 15, 21, 22, 44, 49, 53, 63, 71, 72,  
 127, 139, 144, 151, 164, 183, 188, 189, 196, 199, 213,  
 227, 234, 235, 239  
 Regional economy, 66  
 Regional housing conditions, 66  
 Regional retail development, 59  
 Regional serving retail outlets, 240  
 Regional Water Quality Control Board (RWQCB), 49, 183, 199  
 Regional serving retail uses, 53  
 Regulation, 59, 78, 160, 167, 234  
 Regulations, 7, 8, 15, 16, 18, 25, 26, 27, 28, 40, 41, 47,  
 49, 50, 51, 53, 54, 55, 56, 59, 63, 65, 66, 71, 103, 110,  
 167, 179, 188, 196, 197, 207, 214, 219, 235, 236, 239  
 Rehabilitation, 196, 198  
 Relocation, 44, 64, 202, 230, 232  
 Remodeling, 21, 51, 79  
 Renovation, 18, 58, 59, 61, 69, 71, 72, 205, 206, 207,  
 208, 212, 214, 216, 219, 228  
 Rental housing, 66  
 Renter-occupied, 44  
 Rents, 66, 144, 214  
 Residences, 15, 72, 171  
 Residential, 2, 8, 9, 19, 21, 28, 31, 40, 44, 45, 47, 50,  
 51, 53, 54, 55, 57, 58, 59, 60, 63, 65, 66, 67, 69, 70,  
 72, 74, 76, 109, 135, 142, 151, 155, 159, 161, 171, 173,  
 174, 175, 188, 202, 205, 208, 209, 211, 212, 219, 223,  
 226, 228, 229, 230, 235  
 Residential hotels, 9, 66  
 Residential neighborhoods, 8  
 Residential Permit Parking (RPP) program, 11, 13, 135, 143,  
 144, 155, 156, 161  
 Residents, 8, 9, 26, 53, 59, 60, 61, 63, 65, 66, 70, 76,  
 103, 135, 174, 176, 201, 204, 211, 213, 215, 223, 224,  
 234, 235

Resources, 4, 9, 21, 58, 68, 123, 165, 166, 208, 220, 223, 227, 234  
 Restaurants, 54, 55, 57, 69, 76, 98  
 Restrictions, 11, 115, 135, 202, 205  
 Retail, 2, 3, 7, 8, 9, 13, 18, 21, 31, 40, 44, 45, 50, 51, 53, 54, 55, 57, 58, 59, 60, 63, 64, 69, 70, 72, 73, 74, 75, 76, 77, 92, 94, 98, 125, 126, 137, 141, 142, 144, 146, 147, 155, 156, 158, 160, 161, 162, 164, 171, 188, 201, 204, 205, 208, 212, 214, 217, 220, 223, 224, 227, 228, 229, 230, 231, 233, 234, 235  
 Retail sales tax, 217, 224, 225  
 Revenue, 196, 213, 214, 215, 216, 217, 221, 223, 224, 226  
 Revenues, 19, 68, 213, 214, 215, 217, 218, 221, 222, 223, 224, 225, 226, 235  
 Revitalization, 59  
 Revitalize, 7, 27, 71  
 Rezoned, 47  
 Richmond, 14, 137, 138, 153, 154, 165, 166, 230  
 Richter scale, 192  
 RIDES for Bay Area Commuters, 139  
 Ridesharing, 11, 137, 139, 158  
 Road, 94, 127, 151, 211, 213  
 Roads, 176, 239  
 Rockridge, 234  
 Roofs, 79, 201  
 Rooftops, 202  
 Runoff coefficient, 17, 201, 202  
  
 Safety, 43, 59, 132, 170, 179, 192, 207, 214, 215, 219, 223, 225  
 San Andreas Fault, 16, 189  
 San Francisco Bay, 10, 88, 94, 117  
 Sanborn Fire Insurance Maps, 179, 181, 182  
 Sanitary sewers, 198, 199, 202, 203, 209  
 Satellite parking lot, 137  
 Satellite parking program, 145, 155, 162  
 Schools, 171, 173, 185, 216, 224  
 Secondary employment, 71  
 Secondary job generation, 70  
 Security, 205, 207  
 Sediment, 196, 199, 203  
 Sediment loading, 16  
 Seismic, 16, 43, 192, 194, 196, 197, 229, 240  
 Seismic hazards, 194, 196  
 Setbacks, 58, 84, 110, 115, 122, 123, 124  
 Sewage, 199, 208, 209, 211  
 Sewer infiltration and leakage, 198  
 Sewers, 17, 18, 198, 199, 201, 202, 203, 209, 214, 239  
 Shaded, 102  
 Shading, 98, 102, 103, 113, 117, 119, 124, 125  
 Shading impacts, 113  
 Shattuck Avenue, 16, 21, 33, 34, 35, 37, 39, 40, 50, 51, 54, 57, 58, 64, 65, 66, 67, 68, 79, 81, 84, 88, 92, 94, 95, 98, 102, 110, 113, 115, 117, 119, 121, 122, 123, 124, 125, 126, 127, 128, 129, 131, 132, 137, 138, 140, 145, 149, 150, 151, 152, 154, 158, 159, 163, 171, 196, 198, 205, 206, 214, 219, 220, 222, 228, 229, 230, 233, 234  
 Shattuck Hotel, 171  
 Shoplifting, 204  
 Shoppers, 26, 213  
 Shrubbery, 98  
 Shuttle, 11, 137, 138, 145, 162, 222  
 Sidewalks, 11, 84, 88, 92, 94, 98, 102, 104, 109, 117, 125, 126, 140, 141, 159, 220  
 Significant Structures, 79, 110, 117, 119  
 Signing, 139  
 Signposts, 140  
 Signs, 16, 128, 188  
 Silt, 17, 189, 194, 201  
 Single occupant vehicle (SOV), 14, 132, 141, 157, 167, 170  
 Skyline, 94, 98, 110, 113  
 Socioeconomics, 7, 9, 43, 49, 51, 63, 67, 68, 71, 234  
 Soil liquefaction, 194  
 Soils, 7, 8, 15, 16, 43, 168, 183, 185, 188, 196, 197, 234  
 Soils and seismic safety, 2  
 Solar access, 58, 104, 113, 115, 117, 126  
 Solid waste, 18, 211  
 Solid Waste Management Plan, 211  
 Solvents, 183  
 Sororities, 67  
 Southern Pacific Railroad terminus, 84  
 Special assessments, 216  
 Spills, 17, 201  
 Stairways, 98, 205  
 Stark Residential Hotel, 171  
 State Clearinghouse, 1, 4  
 State Department of Water Resources (DWR), 202  
 State Historic Building Code, 16, 196, 197  
 State subventions, 213, 217, 224, 225  
 Steelhead, 199, 203  
 Stone, 79, 81, 92, 121, 196  
 Storm drains, 17, 16, 17, 196, 197, 198, 199, 201, 202, 203  
 Stormwater, 209  
 Strawberry Creek, 17, 126, 199, 201, 202, 219, 222, 239  
 Strawberry Creek Management Plan, 199, 201, 203  
 Streamlined permit process, 54  
 Street cleaning program, 14, 17, 169  
 Street tree planting plan, 220  
 Street tree plantings, 102  
 Street-cleaning, 169  
 Streetscape, 121, 122  
 Stucco, 84, 92, 121, 196  
 Students, 26, 63, 67, 173  
 Subventions, 217, 224  
 Sulfur oxides, 14  
 Sulfur oxides (SOx), 14, 168, 169  
 Sun/shade diagrams, 121, 122, 124  
 Sunlight, 10, 98, 102, 109  
 Sunlight access, 102  
 Surface parking lots, 55, 57  
 Suspended solids, 199  
  
 Tax, 19, 188, 196, 214, 215, 216, 217, 218, 222, 223, 224, 226, 235  
 Tax code area, 216  
 Taxes, 66, 215, 216, 217, 224, 225  
 Taxi, 137, 138, 139  
 Taxi stands, 134  
 Taxicabs, 11, 137  
 Tectonic, 189  
 Teknekron Building, 64, 84  
 Telegraph, 127, 137, 151, 152, 154, 230  
 The Promenade, 228  
 Theaters, 98, 134  
 Thefts, 204  
 Thermal pollution, 199  
 TMODEL, 148  
 Topography, 84, 94, 189  
 Total dissolved solids, 199  
 Total suspended particulates (TSP), 14, 168  
 Toxics, 7, 15, 43, 49, 168, 198, 234  
 Trace metals, 17, 199  
 Traffic, 8, 9, 11, 12, 14, 15, 26, 41, 53, 59, 61, 68, 84, 92, 94, 125, 127, 128, 129, 130, 132, 135, 139, 141, 142, 145, 146, 147, 148, 151, 158, 159, 160, 161, 164, 165, 167, 168, 169, 170, 171, 174, 176, 178, 204, 206, 221, 223, 227, 234, 236  
 Traffic signals, 128, 159  
 Trains, 138  
 Transit, 11, 12, 13, 14, 50, 68, 127, 132, 135, 137, 139, 141, 143, 145, 147, 151, 152, 153, 154, 157, 158, 159, 170, 171, 221, 239, 240  
 Transit accessibility, 139  
 Transportation, 1, 2, 3, 7, 8, 10, 11, 12, 13, 41, 43, 49, 50, 53, 54, 58, 59, 61, 63, 67, 78, 92, 127, 132, 135, 138, 140, 141, 142, 143, 144, 145, 146, 147, 148, 151, 152, 155, 157, 158, 159, 160, 161, 162, 164, 167, 168, 170, 174, 176, 215, 217, 221, 225, 227, 236, 239  
 Transportation services fee, 19, 145, 213, 217, 221, 225, 226  
 Travel patterns, 132



Trees, 84, 88, 92, 94, 98, 102, 115, 117, 122, 124, 125, 126, 140, 220  
 Trip generation rates, 12, 146  
 Trucks, 11, 132, 135, 170, 171, 176, 206, 212  
 Transportation systems management TSM, 12, 13, 141, 143, 144, 147, 151, 155, 156, 157, 158, 162, 164  
  
 U.C. Berkeley campus, 53, 92, 94, 98, 110, 115, 117, 119, 124, 138, 146, 234  
 U.C. Office of President, 71  
 U.S. Department of Housing and Urban Development (HUD), 219  
 U.S. Environmental Protection Agency (EPA), 167  
 U.S. EPA, Office of Solid Waste, 170  
  
 Underground storage tanks (UST), 14, 15, 16, 168, 179, 188  
 Unemployment, 64, 65  
 Uniform Building Code, 16, 196, 197  
 Uniform Fire Code, 206  
 University, 1, 9, 11, 12, 21, 33, 34, 35, 37, 39, 40, 43, 44, 47, 49, 50, 54, 57, 58, 61, 65, 66, 67, 68, 81, 84, 88, 89, 94, 98, 102, 110, 113, 115, 117, 123, 124, 126, 127, 128, 129, 131, 132, 137, 138, 149, 150, 151, 152, 153, 154, 159, 161, 163, 171, 173, 174, 185, 199, 203, 205, 214, 218, 219, 220, 222, 227, 228, 229, 230, 231, 232, 233, 234, 236  
 University campus, 124, 126  
 University Capital Improvement Program, 228  
 University Hall, 115  
 University of California, 9, 17, 21, 41, 44, 49, 50, 51, 61, 63, 64, 66, 67, 88, 171, 208, 222, 227  
 Urban design, 2, 79  
 Urban design and visual quality, 10  
 Urban runoff, 17  
 Utility users tax, 213, 217, 224, 225  
  
 Vacancy, 9, 64, 67, 147  
 Vacant parcels, 8  
 Vanpooling, 138  
 Vanpools, 139, 158  
 Variance, 27, 175  
 Vegetation, 203  
 Vehicles, 14, 127, 130, 132, 138, 170, 176, 204, 205, 206, 222  
 Version, 13, 227, 233  
 Veterans' Building, 50, 53  
 View corridors, 10, 79, 84, 104, 110, 115, 117, 119  
 Views, 10, 58, 79, 84, 88, 92, 94, 97, 98, 110, 113, 115, 117, 119, 126  
 Visual, 7, 10, 42, 43, 51, 53, 58, 59, 61, 79, 84, 88, 92, 94, 98, 102, 103, 104, 109, 110, 113, 115, 117, 119, 121, 122, 123, 124, 125, 240  
 Visual sensitivity, 104  
 Volume-to-capacity ratio, 130  
  
 Wastewater, 17, 18, 198, 201, 203, 209, 211  
 Wastewater capacity fee, 209  
 Water, 7, 17, 18, 43, 49, 102, 183, 194, 198, 199, 201, 202, 203, 206, 207, 208, 209, 219, 234, 240  
 Water banking, 207  
 Water conserving toilets and appliances, 208  
 Water quality and hydrology, 17, 201  
 Water supply, 18, 207  
 Water supply facilities, 207  
 Water-conserving irrigation systems, 208  
 Waterfront, 152, 211, 214  
 Watershed improvements, 207  
 Weather, 17, 121, 139, 165, 198, 199, 202, 209  
 Wheelchairs, 127, 205  
 Wind speed, 165  
 Wind tunnel effect, 102  
 Windows, 84, 92, 94, 109, 110, 121, 125, 174, 178, 205  
 Winds, 102, 104, 165  
 Winter, 10, 67, 102, 165, 202  
  
 Zero lot line development, 121  
 Zoning, 1, 8, 9, 25, 28, 33, 40, 41, 47, 48, 50, 51, 52, 53, 54, 55, 56, 58, 59, 68, 122, 123, 124, 144, 158, 188, 239  
 Zoning Ordinance, 26, 51, 54, 58, 61, 79, 103, 122, 123, 124, 126



## **CHAPTER XI**

### **APPENDIX A**

#### **NOTICE OF PREPARATION (NOP), INITIAL STUDY AND LIST OF NOP RECIPIENTS**







# City of Berkeley



Planning and Community  
Development Department  
Civic Center Building  
2180 Milvia Street, 2nd Floor  
Berkeley, California 94704

## NOTICE OF PREPARATION

Date: June 17, 1988

To: State Clearinghouse and  
All Interested Parties

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Berkeley, acting as the Lead Agency, will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project, if any.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Environmental Initial Study is also attached.

Project Title: Downtown Plan

Project Applicant: City of Berkeley Department of Planning and  
Community Development

Due to the time limits mandated by State Law your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. Please send your response to **Ruth Grimes** at the address shown above. We will need the name of a contact person in your agency.

Eve Bach  
Acting Planning Director

## NOTICE OF PREPARATION

### PROJECT SUMMARY/DISTRIBUTION LIST

Project Title/Address: Downtown Plan

Applicant: City of Berkeley Department of Planning and Community  
Development

#### Project Description:

The Downtown Plan for the City of Berkeley seeks to establish the Downtown as a compact, economically vital historic city center with a defined core area and transition zones buffering residential neighborhoods. The plan sets forth objectives and policies for the area and outlines programs to fulfill the goals for the Downtown. Overall, the amount and scale of development permitted under the proposed plan is less than that permitted under current zoning. In addition, the proposed plan provides for the development of more specific zoning regulations, design review regulations and transportation services requirements to minimize the impacts of any future development. Additional programs are proposed to improve the safety of the buildings in the area and to improve the visual appearance and vitality of the area.

#### Location:

The City of Berkeley, Alameda County

#### Probable Environmental Effects:

1. Increases in vehicular traffic could result in increased congestion, noise, and a possible reduction in the ambient air quality.
2. Increased development and vehicular traffic could result in an increased demand for parking in the Downtown and the surrounding neighborhoods.
3. Increased development, particularly office and retail development, could create a demand for additional housing, various city services and utilities.
4. The proposed programs could require additional City fiscal and financial resources to develop, implement and administer.

#### List of Organizations

Jim Novosel for  
Berkeley Design Advocates  
2268 Cedar Street  
Berkeley, CA 94709

Elyce Judith for  
Urban Ecology  
1635 1/2 McGee  
Berkeley CA 94703



Ron Kilcoyne for  
AC Transit  
508 16th Street  
Oakland CA 94612

Mrs B.C. White for  
Downtown Merchants Assoc.  
6110 Ocean View  
Oakland, CA 94618

Dorothy Walker for  
University of California  
1492 Euclid Ave.  
Berkeley CA 94708

Sarah Essrow for  
Gray Panthers  
2025 Durant Ave. #101  
Berkeley CA 94704

Robert Feinbaum for  
LeConte Neigh Assoc.  
2703 Fulton Street  
Berkeley CA 94705

Chris Adams for  
U.C. Systemwide  
2199 University Hall #491 A  
Berkeley CA 94720

Arlene Silk for  
BAHA  
2415 Eunice St.  
Berkeley CA 94708

Robert Sicular for  
Board of Realtors  
2576 Shattuck Ave.  
Berkeley CA 94705

Jeff Casey for  
Chamber of Commerce  
PO Box 210  
Berkeley CA 94701

Marilyn Ziebarth  
Flatlands Neighborhood Assoc.  
1823 Addison  
Berkeley CA 94703

Linda Veneziano for  
North Berkeley Neigh. Assoc.  
1801 Delaware  
Berkeley CA 94709

Gail Murray for  
Berkeley TRiP  
2033 Center Street  
Berkeley CA 94704

Laurie Berezin for  
ASUC Municipal Lobby  
377 Lennox #3  
Oakland CA 94610

Gary Adams, Env. Coord. for  
Caltrans District 4  
PO Box 7310  
San Francisco, CA 94120

Jean Roggenkamp for  
BAAQMD  
939 Ellis Street, 5th Floor  
San Francisco CA 94109

Steve Cimperman for  
Department of Health Services  
2151 Berkeley Way  
Berkeley CA 94704

Dale Bowyer for  
Regional Water Quality  
1111 Jackson #6040  
Oakland, CA 94607

Robert Stich for  
Calif. PUC  
1390 Market Street #918  
San Francisco CA 94102

Ann Geraghty for  
Air Resources Board  
1131 "S" Street  
Sacramento CA 95814

East Bay MUD  
2130 Adeline Street  
Oakland, CA 94607

CNA  
PO Box 1217  
Berkeley CA 94701

Loreen McMahon for  
State Clearinghouse  
Office of Planning and Research  
1400 Tenth Street  
Sacramento CA 95814

Hans Kreutzberg for  
Office of Historic Preservation  
PO Box 942896  
Sacramento CA 94296-0001

# City of Berkeley



Planning and Community Development Department  
Zoning Division  
Martin Luther King, Jr.  
Civic Center Building  
2180 Milvia Street  
Berkeley, California 94704

(415) 644-6570  
TTY (415) 644-6915

## P R E L I M I N A R Y E N V I R O N M E N T A L I N I T I A L S T U D Y

### I. General Information

Project title (if any) and address or Assessor's block and parcel number(s):  
Berkeley Downtown Plan

Use permit application number and date submitted (if any): n/a

Date environmental information form submitted: n/a

Applicant's name, address and telephone number:  
Planning and Community Development Department  
Civic Center Building  
2180 Milvia Street, 2nd Floor  
Berkeley, CA 94704

Marjorie Macris, Planning Director, 644-6534

### II. Description of Attachments

☒ Environmental checklist and discussion (Lead Agency)

☐ Environmental information form (Applicant)

☐ Use permit or other application (Applicant)

☐ Correspondence or memoranda: \_\_\_\_\_

☐ Mitigation measures \_\_\_\_\_

☐ Other: Downtown Plan Phase 2 Report

### III. Determination

On the basis of the attached initial evaluation, I find:

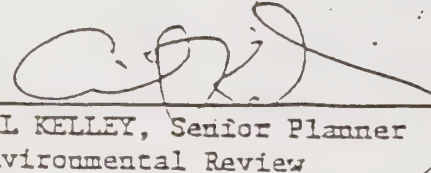
☐ That the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ That although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on the attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared.

☒ That the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

December 4, 1986

Date

  
GIL KELLEY, Senior Planner  
Environmental Review

\*(To be completed by Lead Agency.)

# ENVIRONMENTAL INITIAL STUDY - CHECKLIST

(To be completed by Lead Agency)

Project: Berkeley Downtown Plan Address: n/a Applic. #: n/a

## Impact Rating:

\*Impact described in the attached evaluation

\*Y - Yes, clear potential for significant, adverse impact

\*M - Maybe, possibility of significant, adverse impact

\*N - No, no potential for significant, adverse impact

1. Earth - Will the proposal result in:
  - a. Unstable earth conditions or changes in geologic substructures? N
  - b. Disruptions, displacements, compaction or overcovering of the soil? N
  - c. Change in topography or ground surface relief features? M
  - d. The destruction, covering or modification of any unique geologic or physical features? N
  - e. Any increase in wind or water erosion of soils, either on or off the site? N
  - f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake? N
  - g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure or similar hazards? N
2. Air - Will the proposal result in:
  - a. Substantial air emissions or deterioration of ambient air quality? M
  - b. The creation of objectionable odors? N
  - c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally? N
3. Water - Will the proposal result in:
  - a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters? M
  - b. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff? N
  - c. Alterations to the course or flow of flood waters? N
  - d. Change in the amount of surface water in any water body? N
  - e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? N
  - f. Alteration of the direction or rate of flow of ground waters? N
  - g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? N
  - h. Substantial reduction in the amount of water otherwise available for public water supplies? N
  - i. Exposure of people or property to water related hazards such as flooding or tidal waves? N
4. Plant Life - Will the proposal result in:
  - a. Change in the diversity of species, or number of any species of plant? N
- b. Reduction of the numbers of any unique, rare or endangered species of plants? N
- c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species? N
- d. Reduction in acreage of any agricultural crop? N
5. Animal Life - Will the proposal result in:
  - a. Change in the diversity of species, or numbers of any species of animals? N
  - b. Reduction of the numbers of any unique, rare or endangered species of animals? N
  - c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? N
  - d. Deterioration to existing fish or wildlife habitat? N
6. Noise - Will the proposal result in:
  - a. Increases in existing noise levels? Y
  - b. Exposure of people to severe noise levels? M
7. Light and Glare - Will the proposal produce new light or glare? M
8. Land Use - Will the proposal result in a substantial alteration of the present or planned land use of an area? Y
9. Natural Resources - Will the proposal result in:
  - a. Increase in the rate of use of any natural resources? N
  - b. Substantial depletion of any non-renewable natural resource? N
10. Risk of Upset - Does the proposal involve a risk of an explosion or the release of hazardous substances (including oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions? M
11. Population - Will the proposal alter the location, distribution, density, or growth rate of the human population of an area? Y
12. Housing - Will the proposal affect existing housing or housing demand? Y
13. Transportation/Circulation - Will the proposal result in:
  - a. Generation of substantial additional vehicular movement? Y
  - b. Effects on existing parking facilities, or demand for new parking? Y
  - c. Substantial impact upon existing transportation systems? Y
  - d. Alterations to present patterns of circulation or movement of people and/or goods? M
  - e. Alterations to waterborne, rail or air traffic? N



# Environmental Initial Study Checklist (Continued)

f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u>M</u>	18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	<u>M</u>
Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:		19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	<u>N</u>
a. Fire protection?	<u>Y</u>	20. Archeological/Historical. Will the proposal result in an alteration of a significant archeological or historical site, structure, object or building?	<u>M</u>
b. Police protection?	<u>Y</u>	21. Mandatory Findings of Significance.	
c. Schools?	<u>M</u>	(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<u>N</u>
d. Parks or other recreational facilities?	<u>M</u>	b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	<u>N</u>
e. Maintenance of public facilities, including roads?	<u>Y</u>	c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	<u>Y</u>
f. Other governmental services?	<u>M</u>	d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<u>M</u>
Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	<u>M</u>		
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	<u>N</u>		
5. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a. Power or natural gas?	<u>M</u>		
b. Communications systems?	<u>M</u>		
c. Water?	<u>N</u>		
d. Sewer or septic tanks?	<u>M</u>		
e. Storm water drainage?	<u>M</u>		
f. Solid waste and disposal?	<u>M</u>		
7. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	<u>N</u>		
b. Exposure of people to potential health hazards?	<u>M</u>		

Date: December 4, 1986

Berkeley Downtown Plan  
Discussion of Environmental Impacts

- 1c. A change in topography could occur, should Strawberry Creek be uncovered, as described in the Preferred Development Scenario for the Downtown Plan. Uncovering the creek would require considerable engineering effort, and a likely relocation of the underground channel.
- 2a. Increased vehicular traffic that will occur under the plan could result in additional air emissions and possibly a deterioration of ambient air quality.
- 3a. Uncovering Strawberry Creek will result in a change in present water movements.
- 6a. Increases in traffic and in downtown activity will cause increased noise levels.
  - b. Exposure to severe noise levels could occur, depending on the level of increase in traffic and transit service, and on whether the traffic is concentrated in a transit mall. The location of new downtown housing units could expose residents to severe noise levels.
7. New buildings that are developed under the Downtown Plan could produce glare or reflected light.
8. The Downtown Plan proposes to alter present land use in the downtown. Residential uses will increase, and retail uses will be intensified. There could be a decline in auto-related uses.
10. Excavation that occurs for new downtown development could uncover toxic substances, which could create a risk of upset in the event of an accident.
11. Housing development that is planned as part of the Downtown Plan will cause the resident population to increase, thereby increasing the downtown population density and distribution.
12. The Downtown Plan will have some impact on housing demand. New commercial and office employees may relocate to Berkeley to be near to their place of work. Some housing development is projected to occur as a part of the Plan itself. The demand for housing in adjacent neighborhoods could be affected by intensification of downtown land use.
- 13a. Development that occurs under the Plan will generate additional vehicle movements and trips for both work and non-work trips. The current Downtown Transportation Study projects that under Scenario Two (the development approved for further testing), daily external person trips would increase by 66,091 for auto trips, 17,303 for transit, and 10,944 for bicyclists and pedestrians. The projected increase in PM peak hour external auto vehicle trips would bring the total to 14,871, an increase of 47% from the present condition.

Plan-related development will also require increases in transit service, which will contribute to the generation of additional vehicular movement.

b. Existing parking facilities will be impacted by the plan, as parking demand will be generated by new office and commercial uses, new housing, and intensification of land uses.

c. The development projected in Scenario Two will have a substantial impact on the existing transportation system. As analyzed in the Downtown Transportation Study, all components of the existing system will be impacted. There will be more vehicles using the street network, and both BART and AC Transit will need to expand their service to downtown. The entry ways into the City and into the downtown will also be impacted by increased traffic; including the freeways and the local arterials.

d. Alterations to present patterns of circulation and people/goods movement could result in accordance with traffic and transportation improvements to be included in the transportation section of the Plan. After the final phase of the Downtown Transportation Study, it will be more clear what the alterations might be.

Additional alterations to present circulation patterns could result if downtown congestion diverted traffic through adjacent neighborhoods.

f. Increases in the amount of all types of traffic in downtown could also increase the traffic hazards to motor vehicles, bicycles and pedestrians. Some traffic improvements may result in situations that increase the hazard for pedestrians or bicyclists.

14a. Additional fire and police protection will be necessary to service new

14b. office, commercial and residential development.

14c. Residents of new downtown housing could include school-aged children, who would be attending Berkeley schools.

14d. Residents of new downtown housing units could impact the use of parks and recreational facilities in downtown and the immediate vicinity.

14e. Intensification of land uses in downtown and new development will require increased maintenance of public facilities, including sidewalks, roads and other public space.

14f. Development, programs and projects that occur as part of the Downtown Plan may have an effect on governmental services associated with development and operating/administering programs.

15a. Substantial amounts of fuel or energy could be used in maintaining downtown buildings.

16(a,b,c,d,e) Development that occurs under the Downtown plan could require alterations to various utilities, including power or natural gas, communication systems, sewer lines, storm drains and solid waste disposal.



Discussion on Environmental Initial Study - Berkeley Downtown Plan

- 17b. Excavation for new development in the Downtown Plan could unearth toxic substances which might result in people being exposed to potential health hazards.
18. Downtown development regulations will attempt to minimize the obstruction of any scenic views or vistas but it is possible that some may be impacted.
20. Regulations in the forthcoming plan will protect historical landmark buildings from destruction, but significant structures, objects or buildings may be altered through renovation and adaptive reuse.
- 21c. The Downtown Plan will have cumulative impacts. Over the twenty year period, the plan may affect local and regional traffic and transportation systems (I-80, Bart, AC Transit), access into and throughout Berkeley (University, Shattuck, Ashby Avenues), housing demand and/or supply, economic opportunities, and the visual appearance of downtown from locations within Berkeley and around the Bay. The extent of these and other impacts will also depend on other development activity in the city, especially the University of California, and the region.
- 21d. During excavation for new construction as part of the Downtown Plan, the potential discovery of underground toxic substances may cause adverse effects on human beings.



# City of Berkeley



Planning and Community  
Development Department  
Civic Center Building  
2180 Milvia Street, 2nd Floor  
Berkeley, California 94704

## Supplement to the Initial Study City of Berkeley Downtown Plan

June 15, 1988

This supplement to the previously prepared Initial Study reflects the changes to the Draft Downtown Plan. The original Initial Study was prepared on the Revised Scenario 2. The City of Berkeley has subsequently, in February, 1988, released the Draft Downtown Plan.

The level of development proposed in the Draft Downtown Plan is less than that proposed in the previously evaluated Scenario 2. The nature of impacts described in the earlier Initial Study will be the same, but the level of these impacts will generally be slightly less, reflecting the lessened amount of development. Height limits have been lowered slightly throughout the Downtown area, thus reducing the maximum level of development possible. Otherwise, all items contained in the Initial Study dated 12/4/86 remain the same except for the following addition:

### 10, 17: Risk of Upset and Human Health

The Draft Downtown Plan proposed new seismic requirements and programs in compliance with Assembly Bill 547. These programs will require the identification and subsequent seismic strengthening of unreinforced masonry buildings in the Downtown. This will considerably reduce the danger to the occupants of these buildings and pedestrians in the area in the event of an earthquake.

An Environmental Impact Report will be prepared for this project.

Environmental Review Officer



# City of Berkeley



Planning and Community  
Development Department  
Civic Center Building  
2180 Milvia Street, 2nd Floor  
Berkeley, California 94704

## PUBLIC NOTICE

### FOR SCOPING MEETING

#### ON ENVIRONMENTAL IMPACT REPORT PREPARATION FOR BERKELEY DOWNTOWN PLAN

A public meeting will be held on Monday, July 11, 1988 at 7:30 P.M. in the North Berkeley Senior Center at 1909 Hearst Street, Berkeley, California.

The City of Berkeley has hired the firm of Mundie & Associates to prepare an Environmental Impact Report on the Draft Berkeley Downtown Plan. The purpose of the scoping meeting is to provide an opportunity for any person or agency concerned with the environmental effects of the Downtown Plan to express concerns. This will assist the City and the Consultants in identifying significant effects to be analyzed in depth in the EIR, determining any alternatives and mitigation measures, and in eliminating from detailed study issues found not to be important.

Any written correspondence or questions should be directed to Ruth Grimes, Senior Planner, (644-6534), City of Berkeley, Planning and Community Development Department, 2180 Milvia Street, Berkeley, California. All written communication must be submitted by July 11, 1988. The Environmental Initial Study for this project may be reviewed in the Planning Department during regular business hours.





## APPENDIX B

### DOWNTOWN PLAN COMMITTEE MEMBERSHIP LIST

Denise Pinkston, Chair	Planning Commission
Fred Collignon	Planning Commission
Ken Stein	Landmarks Commission
Dave Davis	Board of Adjustments
James W. Bradley	Transportation Commission
Robert Sicular	Board of Realtors
Dorothy Walker	U.C. Berkeley
Irving Rubin	Downtown Business Association
Eli Cukierman	Downtown Business Owner
Chris Liemans	ASUC Municipal Lobby
Neil Dunlop	Milvia-King Alliance
Doralee White	Downtown Merchant
Jeff Leiter	Chamber of Commerce
Robert Feinbaum	LeConte Neighborhood Assoc.
Linda Veneziano	North Berkeley Neighborhood
Thelette Bennett	Berkeley High School
Jim Novosel	Berkeley Design Advocates
Fran Violich	Downtown Planning Study Group
Marilyn Ziebarth	Flatlands Neighborhood Assoc.
Elyce Judith	Urban Ecology
Gail Murray	Berkeley TRiP
Peter Tannen	AC Transit
Arlene Silk	Berkeley Architectural Heritage Ass'n
Clifford Fred	At Large
Rob Olshansky	At Large
JoAnn Price	At Large
Rivka Sigal	At Large

#### Former Members

Eric Parfrey	Planning Commission
Alan Goldfarb	Planning Commission
Carolee Peterson	Planning Commission
Andrew Youngmeister	Landmarks Commission
Joe Hansen	Landmarks Commission
Chuck Siegel	Transportation Commission
Hale Zukas	Transportation Commission
Laurie Berezin	ASUC Municipal Lobby
Kath Campbell	ASUC Municipal Lobby
Marie Anderson	Downtown Merchant
Sara Essrow	Downtown Resident
Ron Kilcoyne	AC Transit
Sue Stropes	AC Transit
Stephen Swanson	At Large
David Snippen	At Large

**Staff:** Marjorie Macris, Planning Administrator  
Ruth Grimes, Senior Planner  
Judy Chess, Associate Planner  
Sylvia Toth, Senior Transportation Planner  
Norma Hennessey, Graphics Illustrator  
Neil Mayer, Office of Economic Development  
Angela Kucherenko, Analyst, Office of Economic Development  
Dawna Ward, Supervising Clerk





## APPENDIX C

### SALT LAKE CITY ORDINANCE ADDRESSING NEWSRACKS

#### Chapter 14.36

#### NEWSRACKS

##### Sections:

- |           |                                    |
|-----------|------------------------------------|
| 14.36.010 | Purpose and intent of provisions.  |
| 14.36.020 | Definitions.                       |
| 14.36.030 | Registration—Required when.        |
| 14.36.040 | Registration—Filing time.          |
| 14.36.050 | Registration—Information required. |
| 14.36.060 | Registration—Processing fee.       |



- 14.36.070 Registration—Administrative Review.
- 14.36.080 Registration—Term—Rights granted—Liability agreement.
- 14.36.090 Registration—Not transferable.
- 14.36.100 Installation, operation and removal.
- 14.36.110 Expanded CBD standards.
- 14.36.120 Transition implementation.
- 14.36.130 Unlawful acts—Correction notice—Removal by city when.

#### 14.36.010 Purpose and intent of provisions.

The city council hereby finds and declares:

A. The primary intended use of the streets and sidewalks of the city is the movement of people and property. Generally speaking, the city considers its streets and the real property interests therein to be a valuable asset, one which it intends to control by regulation and will not allow to be appropriated by private enterprise.

B. The city has an obligation to the general public to ensure reasonably unobstructed passage over the public ways in a clean, safe and orderly manner.

C. The city has an obligation to protect the health and safety of the public, and to protect persons, including minors, from unwilling exposure to explicit sexual material.

D. Inappropriately located newsracks can pose a significant hazard and annoyance to pedestrians, abutting landowners, vehicles, and the maintenance of public improvements.

E. The uncontrolled construction, placement and maintenance of newsracks unreasonably interferes with the public's right to safe and unobstructed passage and tends to physically and visually clutter the public rights-of-way and required setbacks. Such placement, construction and maintenance of newsracks must be reviewed in relationship to proximity, design and use of other existing or proposed street improvements and furniture of the streetscape, including but not limited to sign and lamp posts, parking

meters, bus shelters and benches, planters, telephone booths, traffic devices, bus stop areas, loading zones, and landscaped setbacks.

F. The city's core central business district ("CBD") is a particularly congested and important area. The aesthetically pleasing and functional design and regulation of the use of streets and sidewalks in the CBD and in the area planned for the expansion of the CBD ("Expanded CBD") is extremely important in developing and maintaining order for the public good.

G. The city has gone to great lengths in its street improvement program in existing and proposed beautification projects within the core and Expanded CBD to create an aesthetically pleasing and harmonious streetscape which also functions safely and efficiently. Outdoor newsracks, as part of the streetscape furniture, should be designed, constructed and placed in the Expanded CBD according to the proposed pattern to carry out those objectives.

H. Historically, the use of the streets for commercial enterprise has been precluded to preserve the streets for public purposes and to avoid the appropriation of public property or the creation of unfair economic advantage to businesses competing in the business district on private property. Distribution of newspapers has been a notable, but limited exception allowed in business districts to accommodate convenient dissemination of the news to encourage an informed citizenry, even though such distribution from newsracks competes with normal retail or subscription methods. Use of the streets in commercial districts where subscription is less common should not be absolutely denied, but is subordinate to the street's use for public purposes. This private use of the streets, afforded certain constitutional protection under freedom of expression, is being regulated to ensure subordination to public purposes and protection to the city and its residents, by indemnifying the city against any liability arising out of this use of public property.

I. Daily newspapers of general circulation provide the most comprehensive and detailed information regarding local advertising and state and local news, which is of greatest interest to those in the Expanded CBD, and becomes stale on a daily basis requiring rapid turnover. It is not inappropriate to give daily publications of general and large circulation priority when sites within the Expanded CBD are limited. Nor is it inappropriate to require relinquishment of a multiple rack to a newcomer in the event of localized saturation to achieve dispersal and nonproliferation.

J. The above strong compelling governmental interests compete against public interests in freedom of expression and the private commercial interests of distributors. The city desires, in the ordinance codified in this chapter, to balance those interests. Therefore, it requires registration to reasonably regulate the use of the streets and streetscape by newsracks, as to time, place and manner, and to provide for efficient and reasonable administration and enforcement of the regulations. (Prior code § 20-39-1)

#### 14.36.020 Definitions.

Defined terms as used in this chapter include:

A. "Expanded CBD" means the area of downtown bounded on the north by the north side of North Temple Street; on the east by the east side of 200 East Street; on the south by the south side of 500 South Street; and on the west by the west side of 400 West.

B. "Face of a block," for spacing purposes herein, means one side of a street between two consecutive intersecting streets, but does not extend across the street.

C. "Newsracks" means any outdoor self-service or coin-operated container, rack or structure used or maintained for the distribution of newspapers, news periodicals, or other printed material. For the purpose of spacing and location restrictions, every thirty linear inches of the width of a newsrack shall count as one individual

newsrack, without regard to the number of supporting pedestals, dispensing units, bases or coin mechanisms. For zoning purposes each newsrack shall be considered a retail sales use.

D. "Parkway" means parking strips or that area between the sidewalk and the curb of any street, and, where there is no sidewalk, that area between the edge of the roadway and the property line adjacent thereto. "Parkway" shall also include any area within a roadway that is not open to vehicular travel.

E. "Roadway" means that portion of a street improved, designed or ordinarily used for vehicular travel. Where curb improvements exist, it extends from back of curb to back of curb.

F. "Sidewalk" means any surface provided for the exclusive use of pedestrians.

G. "Street" means all that area dedicated to public use between property lines for public street purposes, and shall include, but not be limited to, roadways, parkways, alleys and sidewalks. (Prior code § 20-39-3)

#### 14.36.030 Registration—Required when.

A. It is unlawful for any person firm or corporation to operate, install or place any newsracks for the display, sale or distribution of printed material outside of a building:

1. Contrary to the standards of this chapter; and

2. Without registering each such newsrack location prior to or within two weeks of its placement and obtaining a certificate of registration under the provisions of this chapter.

B. Any person placing a newsrack on the public way shall hold the city harmless from any claims arising out of the existence or use of the newsrack. A certificate of registration shall be issued after review by the planning department for tentative location approval and by the traffic and city engineer, after finding compliance with the terms of this chapter. Upon certification, registration stickers shall be issued by the city. Thereafter, permanent securing may be completed according to specifications established by the city engineer.



back to licensing. Registrations not certified or denied within sixty days shall be deemed certified.

B. Registrations receiving favorable review shall be returned by planning to licensing, for certification and issuance of registration stickers.

C. Timely registration renewal applications receiving favorable review from the planning director may be referred directly to licensing unless the director desires additional departmental review. (Prior code § 20-39-6(4))

#### **14.36.080 Registration—Term—Rights granted—Liability agreement.**

A. Registration certification shall be valid for a calendar year period ending December 31st.

B. Registration does not grant registrant any property rights whatsoever, and registrant's use of public property is subject to termination and subordinate to uses of the public property when the city determines those needs are incompatible with maintenance of the newsrack or that readjustment is required for saturation under Section 14.36.090, or its successor. If a registration is terminated for public need, the registrant may be given the opportunity to reinstate the location if it becomes available within the same calendar year.

C. The registrant shall indemnify the city from any and all claims arising out of the use of public property related to the placement, installation, use, maintenance or removal of newsracks, and insure the city against any and all related liability. (Prior code § 20-39-6(6))

#### **14.36.090 Registration—Not transferable.**

Newsrack registration shall be valid only for the newsrack, space, location, and publication specified. Registration and renewals shall be personal and are not transferable in any manner to other locations, publications or registrants. (Prior code § 20-39-6(5))

#### **14.36.100 Installation, operation and removal.**

Except where superceded in the Expanded CBD provisions of Section 14.36.110 of this chapter, or its successor, any newsrack which in whole or in part rests upon, in or over any sidewalk or parkway, or outside of a building in the front yard (as defined in Title 21 of the Salt Lake City Code, or its successor) shall be constructed, installed and maintained, and operated in compliance with the following specification and regulations:

##### **A. Specifications of Construction and Methods of Installation and Removal.**

1. No newsrack shall exceed sixty inches in height, thirty inches in width, nor twenty-four inches in depth.

2. No newsrack shall weigh in excess of two hundred sixty-five pounds when empty, including pedestal and base.

3. Each newsrack and identification thereon shall be of unobtrusive neutral colors of grey, black or brown to blend into the streetscape. Lettering may be of black and/or white. However, the bottom six inches of the newsrack door may be of other colors that may be identified with the publication.

4. No newsrack shall be used for advertising signs or publicity purposes other than identification or for dealing with the display, sale or purchase of the newspaper or news periodical therein.

5. Newsracks are not to be secured until registration is certified. No newsrack may be secured by chaining. No newsrack may be secured by bolting or otherwise to any building or permanently fixed object not owned by the owner of the newsrack, without permission by the property owner or its agent. Newsracks may not be secured to publicly owned fixed objects or improvements, such as sidewalks, without complying with bonding, construction and removal specifications of the city engineer. Where installation is limited to bolting into an existing

C. Any registrant desiring to install hard surfacing in the street for a newsrack location must obtain registration certification and a permit to work in the public way from the city engineer under Title 14 of the Salt Lake City Code before newsrack placement. (Prior code § 20-39-2)

#### **14.36.040 Registration—Filing time.**

Newsracks regulated by this chapter shall be filed with the licensing office on a registration agreement form provided by the city prior to or within two weeks after the placement of newsrack, or, in the case of existing newsracks, within six weeks after the effective date of the ordinance codified in this chapter. (Prior code § 20-39-6(1))

#### **14.36.050 Registration—Information required.**

The information to be supplied by the applicant shall include the following:

A. The name, address, telephone number and current business license of the registrant;

B. The name of the publication(s) to be distributed from each newsrack;

C. Additionally, if the registration includes newsracks on the streets in the Expanded CBD, the type of publication, the number of times published per week, its average circulation number per publication in the city and the assignment priority claimed;

D. A photograph or diagram reflecting the size, color, weight and other details or specifications of construction and appearance, together with a description of the method proposed for securing;

E. The location of each newsrack proposed for registration must be identified as to:

1. If it is within the Expanded CBD,

2. If it is on public or private property; if private, disclosure of the private property owner or agent granting permission for placement,

3. A scaled site plan, or a photograph with a measurement for scaling, showing the newsrack's relationship to other existing structures or

streetscape improvements in the immediate vicinity, to verify conformance. (Prior code § 20-39-6(2))

#### **14.36.060 Registration—Processing fee.**

A nonrefundable registration fee of six dollars per requested newsrack shall accompany the initial registration form and annual renewals, to offset the administrative expense of registration and regulation. All registrants subject to registration under this chapter shall have current business and/or other applicable licenses. (Ord. 34-87 § 103, 1987; prior code § 20-39-6(3))

#### **14.36.070 Registration—Administrative Review.**

A. Licensing shall refer all initial and renewal registrations for review as follows:

1. The planning department shall review it for compliance with zoning restrictions and provisions of this chapter, and make tentative assignments for locations as provided herein. If the planning director finds any newsrack does not conform to the ordinances, the director may deny certification of the particular newsrack(s) or may make a tentative assignment conditioned upon correcting adjustments of a minor nature.

2. Certification for conditional assignments shall not be issued until the corrections are made and may be denied after ten days' written notice and continued nonconformity. Conforming newsracks shall be given tentative assignment. The director's decision shall be final unless appealed in writing to the planning commission within thirty days with a request for a hearing. Such hearings shall be held within thirty days of the request.

3. Registrations receiving original location tentative assignments that involve public property shall be forwarded to the transportation engineer for review of placement and to the city engineer for specification of proposed securing and returned to planning. Registrations involving private property shall be referred directly

placed adjacent to the wall of a building shall be parallel to and within six inches of the wall. No newsrack shall be placed or maintained on a sidewalk or parkway opposite a registered newsrack.

6. If the standards herein can be maintained at an approved newsrack location, newsracks may be placed side-by-side or voluntarily attached to one another. However, no more than three newsracks, whether so attached or placed side-by-side, may be registered at the same newsrack location. For spacing purposes, see subsection C of Section 14.36.020, or its successor.

7. No newsrack location shall be located within one hundred feet of another registered newsrack location on the same face of a block.

8. Each newsrack shall be maintained in a clean, neat and attractive condition and in good repair at all times. Newsracks suffering vandalism, damage or which are in need of paint are neither neat nor attractive.

9. Every person who places or maintains a newsrack on the streets of the city shall have such person's name, address and telephone number affixed thereto in a place where the information can be easily seen. Additionally, the newsrack must display the city's registration sticker for the location on the price plate (face plate) or pedestal. Replacement stickers may be obtained from the city at cost as needed for newsracks that are repaired or replaced. The stickers will not exceed eight square inches in size.

10. No person shall sell, offer for sale, advertise or display, keep or maintain in any newsrack any newspaper or other publication which is prohibited by state laws or the ordinances of the city from the sale or distribution to minors.

C. **Tentative Assignment of Registered Locations.** The planning director shall review registrations, make tentative assignments of locations conforming to the criteria of this chapter, and map the same. Outside the Expanded CBD, after the initial transition period where priority shall be given to existing newsracks, priority will be on

a first-come, first-served basis. In the event registrations compete, the date of city's receipt of the fees and completed registration form shall govern. For assignment in the Expanded CBD, see Section 14.36.110, or its successor.

D. **Residential Zones.** Where structures in residential zones house legal nonconforming business uses, the placement and registration of newsracks abutting or closely paralleling the structure's exterior walls shall be allowed. Such placement is deemed a de minimus expansion of the nonconforming use, provided the newsrack also complies with the general standards set forth above in this section. However, this restricted accommodation relating to allowing newsracks to abut exterior walls, shall not be interpreted to allow a newsrack to be located in a landscaped setback existing in front of the nonconforming use, nor in the sidewalk or parkway across from the structure. (Prior code § 20-39-4)

#### 14.36.110 Expanded CBD standards.

Notwithstanding the provisions of Section 14.36.100, or its successor, newsracks outside buildings within the Expanded CBD must also comply with additional specifications of construction herein, and be located in approved newsrack locations complying with the following regulations as to time, place and manner:

A. **Construction Specifications.** Within the Expanded CBD, newsracks outside of buildings shall be of the fixed-pedestal type, of a flat black color according to specifications of the planning commission as illustrated in that diagram attached as Exhibit I to the ordinance codified in this section. Exhibit I and all other exhibits designated in this chapter are incorporated herein by reference, and are attached to the original retained by the city recorder. The city recorder shall retain three copies of all exhibits on file for public reference, but the ordinance codified herein shall be published without the attachments.

B. **Placement at Designated Location.**

sidewalk, a permit to work in the public way is not required. No bolting into brick pavers will be allowed.

6. Upon removal of any newsrack, the owner shall be responsible to restore the site. Where bolting has been used, restoration shall include removal of bolts, grouting of holes, and necessary surface or subsurface repair.

#### B. Placement and Maintenance.

1. No newsrack shall be installed, used or maintained which projects onto, into or over any part of the roadway of any public street, or which rests, wholly or in part, upon, along or over any portion of a roadway.

2. No newsrack shall be installed, used or maintained which in whole or in part rests upon, in or over any sidewalk, parkway, required front yard setback, or when:

a. Such installation, use or maintenance endangers the safety of persons or property;

b. Such site or location interferes with public utility purposes, public transportation purposes or other government use;

c. Such newsrack unreasonably interferes with or impedes the flow of pedestrian or vehicular traffic, the ingress into or egress from any residence, place of business, or any legally parked or stopped vehicle;

d. It interferes with the use of or access to poles, posts, bus benches or shelters, traffic signs or signals, signal control boxes, hydrants, mailboxes, or other objects permitted at or near such location;

e. Such newsrack interferes with the cleaning of any sidewalk or roadway by the use of mechanical cleaning machinery; or

f. The installation intrudes into required landscaped yard setbacks.

3. No newsrack may be placed within a front yard setback when the same is required by zoning.

4. No newsrack which in whole or in part rests upon, in or over any sidewalk or parkway or elsewhere, shall be placed, installed or maintained:

a. Within three feet of any marked or unmarked crosswalk being the extension of sidewalk;

b. Within three feet of any curb face;

c. Within ten feet of any fire hydrant, traffic signal box, fire callbox, police callbox, or other emergency facility;

d. Within five feet of any driveway;

e. Within the parkway adjacent to a designated bus stop, unless it is behind a bus bench or shelter;

f. Within three feet of a bench or bus shelter existing outside of a designated bus stop, unless it is behind the bench or shelter;

g. At any location whereby the unobstructed sidewalk passageway of pedestrians is reduced to less than three-fourths of the sidewalk width for sidewalks twelve feet wide or less, or to a minimum of ten feet where sidewalk width exceeds twelve feet. Where this provision precludes the placement of newsracks on the face of a block, a distributor may request prior approval to construct a concrete pad at its expense in a grass parkway near the corner as part of its registration application. No work can be done until the registration certification occurs and registrant obtains a permit to work in the public way under Title 14 of the Salt Lake City Code from the city engineer;

h. Within three feet of any area improved with lawn (excluding grass parkways), flowers, shrubs, trees or landscape planters, etc.;

i. Within three feet of any display window of any building abutting the sidewalk or parkway, or in such manner as to impede or interfere with the reasonable use of such window for display purposes;

j. Which is not located on hard surfacing;

k. Within fifty feet of another newsrack containing the same publication; and/or

l. Which encroaches or overhangs into a required front yard setback.

5. Newsracks shall only be placed toward the curb (or curb side of a sidewalk) or adjacent to the wall of a building, and the latter is preferred where available and appropriate. Newsracks



#### **F. Relief From Localized Saturation and Adjustment for Newcoming Daily Newspapers.**

1. Within a five-hundred-foot radius (reasonable walking distance) of any given intersection in the Expanded CBD, in addition to a pool of twenty-four spaces reserved for non-dailies, there should be a minimum pool for daily newspapers of up to forty-eight newsrack spaces at twenty-four locations within the public right-of-way, excluding additional newsracks outside or inside buildings on private property. Said number should be more than adequate to provide reasonable access to newspapers of daily circulation. Saturation of all available spaces by daily newspapers is likely to occur only:

- a. At a relatively few localized areas with special marketing attractions; and
- b. unless the high number of spaces available are registered by the relatively few eligible daily newspapers in multiple locations maximizing their marketing sites.

2. In order to provide reasonable access while achieving the public objectives of nonproliferation and dispersal, saturation shall be addressed, not by increasing the number of spaces, but by reassignment, thereby reducing the number of multiple racks held by a single publication.

3. Saturation at a given intersection shall be deemed to occur if every newsrack space available for the pool of daily newspapers on the public right-of-way within a five-hundred-foot or saturation radius of any given intersection is registered. In the event such saturation at a given intersection precludes a newcomers newspaper of daily circulation from obtaining at least one newsrack, it may apply to the planning commission for relief by reassignment; provided:

- a. It has no newsracks on private or public property within the saturation radius;
- b. Multiple registered newsrack spaces within the saturation radius are held by individual daily publications; and

c. The newcomer is willing to pay the registration holder for the expense of physically removing the registered rack, and the current registration fee.

4. Upon receipt of such a request, the planning commission may then require the daily publication holding the highest number of registered newsracks on the public right-of-way within the saturated radius to relinquish one space of the registrant's choosing for reassignment to the newcomer. If it fails to identify its selection, the choice shall be made by the planning commission. If so required, the registrant shall be responsible to remove the newsrack on the reassigned location within thirty days, or be subject to involuntary removal under the rules provided by subsections A and C of Section 14.36.130, or its successor. The hearing at which the commission acts shall constitute the pre-removal hearing afforded by the ordinance.

5. In order to consider such a request for relief, the newcomer's request must be submitted to the planning commission and considered in a public hearing of which written notice to all registrants within the designated saturated radius is mailed at least ten days prior to the hearing. Such written notice shall identify the three registrants holding the highest number of multiple newsrack spaces within the public way of the saturation radius, and advise them to appear and be prepared to select a newsrack to be relinquished or forfeit that selection to the planning commission. As between registrants that tie for the highest number of newsracks, the planning commission shall draw by chance. (Prior code § 20-39-5)

#### **14.36.120 Transition implementation.**

Newsracks which are in place outside of the Expanded CBD or are on private property inside the Expanded CBD prior to the effective date of the ordinance codified in this chapter which do not conform as to color, construction or location shall have a grace period through the end of 1985 in which to comply with all provisions of this

1. In addition to general standards of Section 14.36.100, or its successor, applicable to public and private property, newsracks within the street in the Expanded CBD shall be located only at those designated locations illustrated on Exhibit 2 attached and incorporated by reference. On each ten-acre block in the Expanded CBD, no more than four locations shall be designated on each side of a street. No more than three newsracks shall be allowed at each location.

2. Newsracks containing the same publication may not be located within fifty feet of each other, whether on private or public property.

3. Of the three newsrack spaces available for assignment in the street at each of the four designated locations per block face, one newsrack space shall be reserved as a pool for non-daily registrants, and two shall be reserved for daily publications.

#### **C. Original Assignment and Renewals.**

1. Tentative assignments of registered spaces on initial or original registrations shall be made from available locations by the planning director, who shall map registered newsracks for easy reference.

2. **Prioritization.** In the event there is a conflict between eligible newspapers seeking the same space at an approved location and there are insufficient spaces from the reserved pools to accommodate requests, the planning director shall assign locations guided by the following priorities:

- a. A transition priority shall be given to publications with newsracks at designated locations as of September 8, 1983, the date of the public hearing of the ordinance codified in this chapter; thereafter
- b. First priority shall be given to newsracks used for the sale of newspapers of general circulation for Salt Lake County which are published daily, being at least five times per week;
- c. Second priority shall be given to newsracks used for the sale of newspapers which are published daily, at least five times per week, which are not newspapers of general circulation;

d. Third priority shall be given to newsracks used for the sale of weekly publications, being published at least once but less than five days per week.

e. In the event there are eligible publications of the same priority competing for original registrations of the same newsrack spaces at approved locations, the planning director shall assign available spaces giving priority in the following order to:

- i. The earlier date of the completed registration form;
- ii. The highest comparative average daily circulation within the city; and
- iii. The higher number of publications per week.

**D. Registration Renewal of Newsrack Locations on Public Property.** Original registrations of newsracks on public property in the Expanded CBD may be annually renewed upon application by payment of fees for up to five consecutive years for a total of six years, accompanied by submission of a recent dated photograph to verify proper placement. Registration renewal should be certified by the planning director, without referral to the transportation engineer or city engineer unless there is violation of the terms of the registration, ordinance, or other just cause. Any registration which is not renewed annually by February 1st shall expire, subjecting the newsrack to removal and the space to availability for reassignment. After January 30th, licensing shall send notice to registrants which have not applied for renewal, giving each at least ten days' written notice to renew or remove the rack, and the availability for reassignment of any unrenewed newsrack spaces. After February 15th, licensing shall inform the planning director and former registrants of the unrenewed newsrack spaces which have expired.

**E. Installation.** Upon registration certification, newsracks may be permanently fixed pursuant to specification from the city engineer, subject to the terms of the registration agreement.



ordinance and register. Existing newsracks on public property in the Expanded CBD shall have a grace period of six weeks from said effective date in which to comply and register. For the remainder of 1985, such nonregistered newsracks on public streets in the Expanded CBD shall not be subject to enforcement for nonconforming features, but nonregistered newsrack spaces at designated locations shall be available for assignment under Section 14.36.110, or its successor. As an incentive in 1985, the city shall waive the registration processing fee. (Prior code § 20-39-8)

**14.36.130 Unlawful acts—Correction notice—Removal by city when.**

A. If any newsrack is found to be in violation of the provisions of this chapter, including an expired registration, a notice or citation stating the violation, date of violation(s), the city's intention to remove the newsracks if the violation is not corrected or if a hearing is not requested within ten days of the notice, that, upon removal, the location shall be available for reassignment, and the procedure for obtaining an appeal hearing before the planning director, if desired. A request for an appeal shall stay removal. Such notice shall be delivered or mailed postage prepaid to the registrant at the address listed on the registration. If the newsrack is not registered, notice shall be sent to the address listed on the newsrack, and if none, to the publisher. If an appeal hearing before the planning commission is requested, it shall be scheduled to provide the registrant ten days' notice, unless a shorter time is agreed to by the registrant.

B. Alternatively, where a violation involves a newsrack on public property that is improperly positioned or secured, which can easily be remedied upon the site, the city may physically move, realign, remove such attachment or otherwise move such rack or racks upon public property, in order to restore them to a legal condition. The city shall then send a notice of the violation and the corrective measures taken to the registrant, or

to the responsible party indicated upon any unregistered newsrack. If the newsrack is unregistered and bears no name of a responsible party, the notice shall be sent to the publisher.

C. Any newsrack which has been the subject of a violation notice mailed or delivered to the registrant and which remains in violation of the provisions stated on the notice past the ten-day correction period and for which no hearing has been requested, shall be removed by the city and stored in a convenient place. Upon removal, the location shall be available for reassignment. The city shall notify the owner or registrant thereof by mailing a Notice of Removal to the last known address of the owner as described in subsection A above. Such notice shall state the date the newsrack was removed, the reasons therefor, the location and procedure for claiming the newsrack, and the procedure for obtaining a post-removal hearing before the planning director, if desired. Any such newsrack so removed and stored pursuant to these provisions shall be released to the owner thereof, if claimed within forty-five days after such removal, and upon the payment of reasonable charges of removal and storage therefor. Upon failure of the owner to claim such newsrack and pay the reasonable charges within forty-five days after the mailing of the written notice of removal, such newsrack shall be deemed to be unclaimed property in possession of the police department, and may be disposed according to ordinance. (Prior code § 20-39-7)

**APPENDIX D**

**TYPICAL SOUND LEVELS FROM INDOOR AND OUTDOOR NOISE SOURCES**

<b>A-WEIGHTED SOUND PRESSURE LEVEL IN DECIBELS (dB)</b>		<b>NOISE SOURCE</b>
<b>INDIVIDUAL OR COMMUNITY RESPONSE TO CONTINUOUS NOISE</b>		
Threshold of Physical Discomfort	120	Jet Takeoff (Near Runway)
	110	Rock Music Band (Near Stage)
	100	Piledriver (50')
Hearing Damage Criteria for 8-Hour Workday	90	Ambulance Siren (100') Diesel Bus (at Sidewalk)
	80	Inside Boiler Room or Printing Press Plant
	70	Garbage Disposal in Home (3') Inside Sports Car, 50 Mph
Most Residents Highly Annoyed	60	Freight Train (100') Car Passby (50') Average Urban Area
	50	Inside Department Store Inside Business Office Light Traffic (100')
	40	Inside Home
Acceptability Limit for Residential Development	30	Quiet Rural Area
	20	Inside Recording Studio
	10	
Goal for Urban Areas	0	
No Community Annoyance		
Threshold of Hearing		

(100') = Distance in Feet Between Source and Listener

**TYPICAL SOUND LEVELS FROM INDOOR AND OUTDOOR  
NOISE SOURCES AND THEIR EFFECT ON PEOPLE**



U.C. BERKELEY LIBRARIES



C124896343



